AMD'S NEW RYZEN 2 CPUs
BENCHMARKED AND TESTED

AMD MOTHERBOARD ROUNDUP
NEW X470 CHIPSET REVIEWED

GAMING LAPTOPS
INTEL'S 8TH GEN CPUS RANKED

PC PowerPlay
AUSTRALIA'S #1 PC GAMING MAG
SINCE 1996

ISSUE #271 | WORLD OF WARCRAFT: BATTLE FOR AZEROTH

ASUS ROG STRIX FLARE
AN EPIC GAMING KEYBOARD PACKED WITH FEATURES

SWORDS OF DITTO
THE CUTEST RPG YOU'LL PLAY THIS YEAR

WORLD OF WARCRAFT: BATTLE FOR AZEROTH

NEW ISLAND EXPEDITIONS ADD SOME DIABLO TO YOUR FAVOURITE MMO!

nextmedia
9 771326 564019 71
ISSUE #271
$13.99 • NZ $15.90

WAR
THUNDER
EXPERIENCE COMBINED WARFARE
PLAY FOR FREE AT
WARTHUNDER.COM

20.000.000+ PLAYERS 1000+ VEHICLES REALISTIC DAMAGE MODELS

PLAY TANKS, AIRCRAFT AND SHIPS FROM EARLY WWII UNTIL THE 80S

Gaijin ENTERTAINMENT

© 2009—2017 by Gaijin Entertainment. All rights reserved.

STEAM Oculus VIVE PC PS4 Mac

12 www.pegi.info

>PCPP #271

ON THE COVER

WORLD OF WARCARFT: BATTLE FOR AZEROTH

p. 30
Get the lowdown on the new Island Expeditions, and how you can beat them!

REVIEW

FAR CRY 5

p. 41

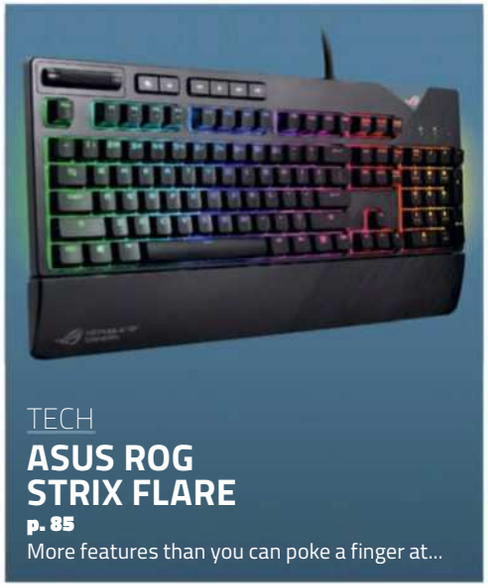
Belting the bible belters

AWARDS

AMD X470 MOTHERBOARD GROUPTEST

p. 64

Four of the latest to go with the new Ryzen 2



TECH

ASUS ROG STRIX FLARE

p. 85

More features than you can poke a finger at...

CONTENTS

FRONTEND

22 PCPP Interview: Wargaming

OPINION

20 JAM
24 Generation XX

FEATURES

30 A Collection Aside
36 Overload
42 Alter Army

GAME REVIEWS

41 Far Cry 5
44 Battletech
46 Sea of Thieves
48 Warhammer: Vermintide 2
50 Telltale Batman
52 Frostpunk
54 Dead in Vinland
55 Swords of Ditto
56 Ni No Kuni 2: Revenant Kingdom
58 Empires Apart
59 Total War Sagas: Thrones of Britannia

TECH

61 Ryzen 2 CPUs
64 ASRock X470 Taichi
65 Asus Crosshair VII Hero Wifi
66 Gigabyte Aorus Gaming 5 Wifi
67 MSI X470 Gaming M7 AC
68 Intel's 8th gen CPUs
70 Asus ROG Zephyrus M GM501GS
71 Gigabyte Aorus X5 v8
72 MSI Raider GE63 8RF
73 Razer Blade Stealth
74 Metabox Prime X
75 Corsair Carbide Spec Omega
76 Corsair Carbide 275R
77 Asus ROG Strix XG32VQ & XG35VQ
78 Alienware AW3418DW
79 LG 32GK850G
80 Logitech X-56
81 Sennheiser GSP-600
82 Razer Elektra V2
83 Logitech G512 Carbon + Hyper X Alloy Elite
84 Razer Core v2
85 Asus ROG Strix Flare
61 RAzer Hyperflux
61 HyperX Pulsure + Razer Goliathus
88 Hotware
90 Inventory

STATE OF PLAY

88 Objects in Space
94 Hotware
94 Menagerie
94 Hagionaut

REALLY?

Really, Malcolm? That's the best photo you could find? It's, like... ten years old. At least! We're gonna have to talk.

Walks down memory lane aside, welcome to my first issue of PC PowerPlay - to say that I'm excited to be sitting here and writing this is bit of an understatement, but before we move on, some thanks are in order.

You know that old saying about standing on the shoulders of giants? Well, it applies here, because a lot of smart minds have brought the magazine to this point. I'm taking over from my old friend and colleague Daniel Wilks, and I am hyper-thankful to pick up the reins of such a finely tuned machine, with some fantastic writers that I now get to work even more closely with. Before him, there are the likes of Anthony Fordham and David Wildgoose, who left their own indelible stamps on the publication, and are still frequent contributors.

And I owe a particular debt to Ben Mansill - now group editor of the Tech and Games gang here at Nextmedia - for starting PC PowerPlay back in the ancient days of 1996.

As for me, I've been Digital Editor at Next for a few years now, so you may know me from this magazine's website - and a few others besides. And hopefully you've liked that work, because you're now going to read a lot more of it.

Speaking of which, enough reminiscing - you've got a magazine to read. See you in a few pages...

David Hollingworth
Editor
@CptHollingworth

"They're all good dogs, Brent."

PC PowerPlay

EDITORIAL

EDITOR David Hollingworth
dhollingworth@nextmedia.com.au
GROUP ART DIRECTOR Malcolm Campbell
mcampbell@nextmedia.com.au
GROUP EDITOR TECH AND GAMING
Ben Mansill
bmansill@nextmedia.com.au
INTERN We need a new one

CONTRIBUTORS

Meghann O'Neill, Terrence Jarrad, Theo, Chris Szewczyk, Anthony Aguis, Morte, James Cottee, James O'Connor, Nathan Lawrence, Seamus Byrne, and Ben Mansill

ADVERTISING

GROUP ADVERTISING MANAGER TECH & GAMING
Cameron Ferris
cferris@nextmedia.com.au
(+612) 02 9901 6348
M: 0405 356 419

ACCOUNT MANAGER TECH & GAMING
Sean Fletcher
sfletcher@nextmedia.com.au
(+612) 02 9901 6367
M: 0402 585 124

ADVERTISING TRAFFIC

Charles Balyck
cbalyck@nextmedia.com.au

PRODUCTION & DIGITAL SERVICES Jon Bishop

CIRCULATION DIRECTOR Carole Jones

SUBSCRIPTIONS

www.mymagazines.com.au
TOLL FREE **1300 361 146**
Locked Bag 3355, St Leonards NSW 1590

nextmedia

Building A, Level 6 207 Pacific Highway
St Leonards, NSW 2065

Locked Bag 5555,
St Leonards, NSW 1590

CHIEF EXECUTIVE OFFICER
David Gardiner
COMMERCIAL DIRECTOR
Bruce Duncan

PC PowerPlay is published by nextmedia Pty Ltd ACN: 128 805 970, Building A, Level 6, 207 Pacific Highway, St Leonards NSW 2065 © 2018. All rights reserved. No part of this magazine may be reproduced, in whole or in part, without the prior permission of the publisher. Printed by Bluestar WEB Sydney, Distributed in Australia by Gordon & Gotch. ISSN 1326-5644. The publisher will not accept responsibility or any liability for the correctness of information or opinions expressed in the publication. All material submitted is at the owner's risk and, while every care will be taken nextmedia does not accept liability for loss or damage.

Privacy Policy: We value the integrity of your personal information. If you provide personal information through your participation in any competitions, surveys or offers featured in this issue of PC PowerPlay, this will be used to provide the products or services that you have requested and to improve the content of our magazines. Your details may be provided to third parties who assist us in this purpose. In the event of organisations providing prizes or offers to our readers, we may pass your details on to them. From time to time, we may use the information you provide us to inform you of other products, services and events our company has to offer. We may also give your information to other organisations which may use it to inform you about their products, services and events, unless you tell us not to do so. You are welcome to access the information that we hold about you by getting in touch with our privacy officer, who can be contacted at nextmedia, Locked Bag 5555, St Leonards, NSW 1590

LG
Life's Good

Now you can truly be trigger happy.

NVIDIA G-SYNC IPS 144Hz

The curve that gives you the edge

The LG 34UC89G UltraWide monitor has a curved 34" screen that immerses you in the game. It features NVIDIA G-SYNC™ which synchronises your senses with ultra-fast paced real time action. With a lightening-quick refresh rate of 144Hz, it responds even faster than your reflexes. Now that's a real game changer.

LG.com.au

DIRE WOLVES

LG

DARWIN PROJECT GOES FREE TO PLAY

But it's still technically in early access, so your mileage may vary.

Survival game meets battle royale title Darwin Project has just announced it's moving to a free-to-play model to increase its player count. The game is currently in early access on Steam, and while it may have a vocal and passionate community, it is - apparently - a somewhat shrinking one.

"We've been fortunate to have a core community of players join us at a very early stage, with many still supporting us during Early Access, and the last thing we want to do is let those passionate players down," said Simon Darveau, Creative Director at Scavengers Studios. "Lately, members of our community have reported longer queue times and difficulty finding matches in lesser populated servers. To bring in new players and maintain a level of activity that ensures players are able to get the most out of Darwin Project, we've decided to make it more accessible by removing the price tag."

So, need some more battle royale in your life? With some really interesting audience participation mechanics? Check out the game on Steam - it'll cost you nothing.

VALVE JUST HAD ITS LEAVE TO APPEAL DISMISSED BY THE AUSTRALIAN HIGH COURT

Yep - looks like they gotta pay up to the Australian government.

There's been a new development in a court case that has been going on since 2014, between the Australian Competition and Consumer Commission, and the sometimes game makers, and giant game distributors, Valve.

And, long story short, Valve just lost the latest round of legal wrangling.

The case revolved around the ACCC's claims that Valve made misleading representations to Australian gamers in regards to gaurantees. In 2016, the Federal Court found that Valve did in fact have a case to answer, and that it should pay a $3 million penalty for its actions. Valve, unsurprisingly, sought to appeal the decision.

But that's a big NOPE, according to the High Court of Australia, which has today dismissed Valve's application.

"This important precedent confirms the ACCC's view that overseas-based companies selling to Australian consumers must abide by our laws. If customers buy a product online that is faulty, they are entitled to the same right to a repair, replacement or refund as if they'd walked into a store," ACCC Commissioner Sarah Court said in today's release.

Pay up, Valve!

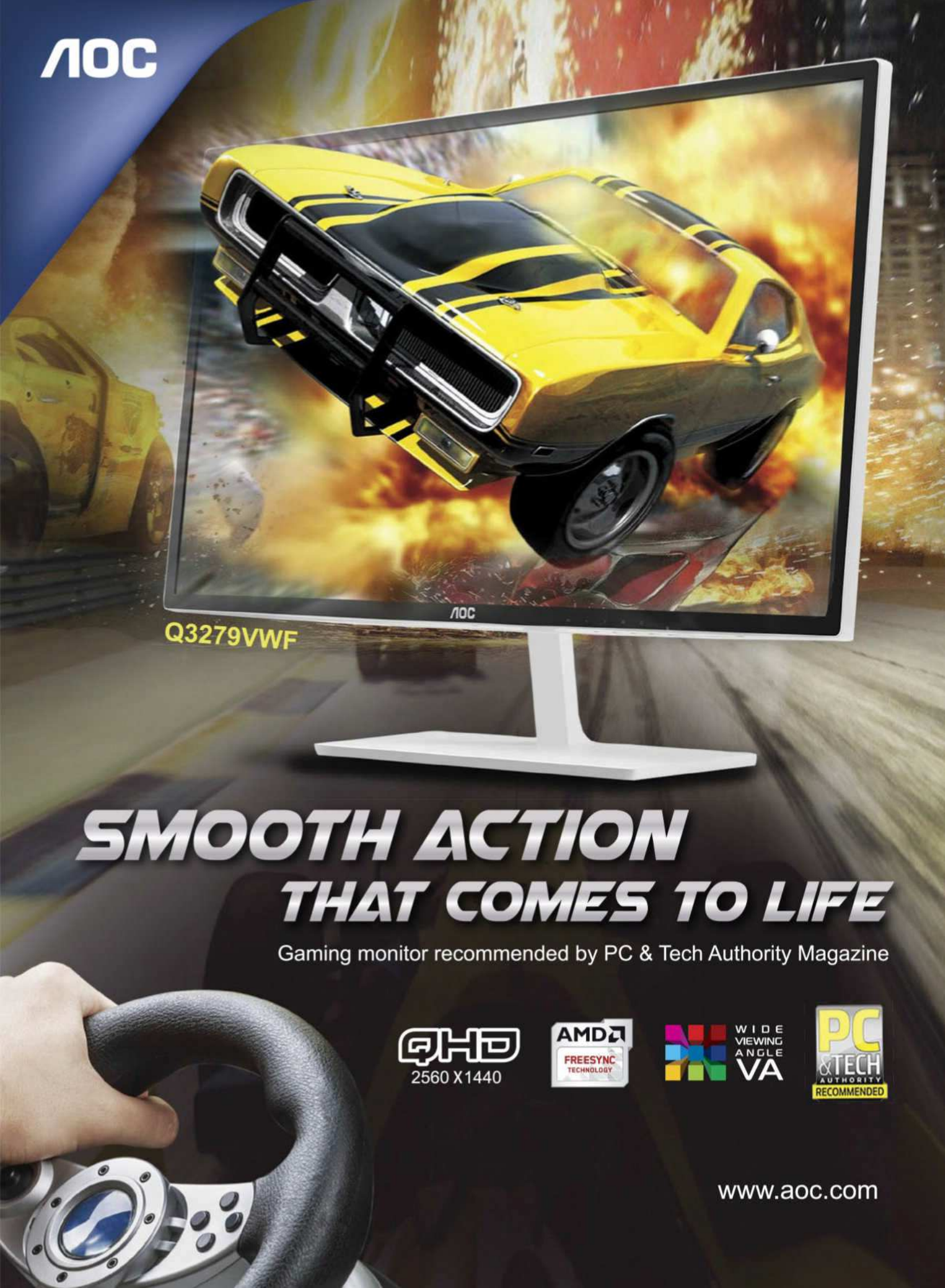
SERIOUS SAM IS BACK, IN SERIOUS SAM 4: PLANET BADASS

And there'll be a tonne of more info at E3 this year.

He's serious. He's called Sam. And he's returning to PC!

Sadly, that's about the limit of our knowledge right now. But publisher Devolver and developer Croteam have promised more news - and explosions, and gibs, and badguys, no doubt - at this year's E3 conference.

Which really isn't that far away my lord where has the year gone?


AOC
Q3279VWF
SMOOTH ACTION
THAT COMES TO LIFE
Gaming monitor recommended by PC & Tech Authority Magazine
QHD
2560 X 1440
AMD
FREESYNC
TECHNOLOGY
WIDE
VIEWING
ANGLE
VA
PC
&TECH
AUTHORITY
RECOMMENDED
www.aoc.com

THERE'S A MESS OF NEW CONTENT COMING SOON TO SEA OF THIEVES

Feel like Sea of Thieves is a bit light on actual stuff? That's gonna change.

I've not yet played Sea of Thieves - curse my refusal to update to Windows 10! - but from what I've heard from colleagues, it's a fun game hampered by a lack of content. Sounds like developer Rare has been listening, as it's just announced a raft (get it?!) of new content drops over the coming months.

First down the gangplank (I can do this all day) will be The Hungering Deep in May, which brings a new AI-driven threat for players to face, new gameplay mechanics, and of course more loot.

Then, in the winter months (well, northern hemisphere summer, southern hemisphere winter), there'll be two more updates - Cursed Sails will bring a new type of ship, while Forsaken Shores adds "a perilous new part of the world to explore."

For now, though, Rare is working away at making the current iteration of the game as strong as possible, and is addressing the following points:

- Bringing players together in interesting ways, encouraging different types of player encounters
- Enriching the world that players adventure in
- Giving players new ways to play
- Giving players a variety of goals and rewards
- Broadening the journey to Pirate Legend and beyond

Rare is very much taking the "launch is just the start" angle with Sea of Thieves, but it really does sound like they're well aware that the game was a little undercooked at launch.

PAX AUSTRALIA 2018 TICKETS ON SALE NOW!

Get in early for, uh, early bird prices.

You know what early birds get? They get worms, and lots of them. Do you want a worm? No? Well how about early bird rates to the just announced single-day and three-day passes for Pax Australia? Yes?

AWESOME.

PAX Australia will kick off down by the banks of the Yarra at the Melbourne Convention & Exhibition Center from the 26th to the 28th of October, and tickets are on sale for single day passes - for $62 - and three day passes - which will set you back $165.

"This year's PAX Aus will be one that you never forget," said Luke Lancaster, content manager, PAX Aus. "Think of that less like something vaguely menacing and more like our continued disbelief in diminishing returns. The whole team is committed to bringing you more panels, games, exhibitors, and things to do than ever before."

Now, to think about pitching my own panel this year...

BANNER SAGA 3 GETS A RELEASE DATE

The last game of the trilogy drops on every damn platform on the 24th of July.

The third and final chapter in the Banner Saga trilogy - Banner Saga 3, in fact - will be hitting PC and consoles on the 24th of July.

"Banner Saga 3 represents the feeling of closure but also immense accomplishment to a trilogy that has been at the very fabric of our lives for many years. We're ever thankful to the fans and backers that have shared this epic journey with us and helped us deliver what we feel is a fitting end to our Viking adventure." Said John Watson, Technical Director of Stoic, in an announcement.

There's a neat pre-order package that looks worthwhile, too, though, you know... pre-orders still suck, but we'll let Stoic and Versus Evil (dev and publisher respectively) get away with this one. Here's what you get in the Dredge Ally Pack:

- Dredge Stoneguard Character - Rank 10 Hero called Kivi
- Unique Combat Ability: Tank
- Unique Dredge Item - Sculptor's Tools
- Exclusive Dredge Heraldry
- Unique Heroic Title: "Shield Cleaver'
- Exclusive Banner Saga 3 Overture Track – by Grammy-nominated and two-time BAFTA winning composer Austin Wintory

There are also three different digital editions to pick up, and a physical retail edition.

The Standard Edition is $US24.99, while the Deluxe Edition (which includes the game's soundtrack, and some other digital goodies) costs $US29.99. The Legendary Edition is $39.99, and boasts the same as the Deluxe, and digital novel, and some more neat game stuff.

Finally, the retail edition is the complete Banner Saga Trilogy - though that's only on Xbone and PS4, so poop. But there will be a PC Bonus Edition with all three games, though only a digital version.

ROG SERIES

ROG MAXIMUS X FORMULA

ROG MAXIMUS X HERO

ROG STRIX SERIES

ROG STRIX H370-F GAMING

ROG STRIX B360-H GAMING

REPUBLIC OF GAMERS

TUF SERIES

TUF B360-PRO GAMING (WI-FI)

TUF Z370-PLUS GAMING

TUF H370-PRO GAMING (WI-FI)

AUSTRALIAN PC AWARDS
GOLD AWARD – Best company
WINNER 2017

AUSTRALIAN PC AWARDS
Best motherboard company
WINNER 2017

AUSTRALIAN PC AWARDS
Best premium motherboard
WINNER 2017

300 SERIES

intel CHIPSET Z370 inside
intel CHIPSET H370 inside
intel CHIPSET B360 inside
intel CHIPSET H310 inside

TUNED TO PREFECTION. COOLED TO THE CORE.

5-Way Optimization
One-touch intelligent overclocking & cooling

Cooler by Design
M.2 heatsink & GPU-temperature sensing

ASUS Aura Sync & 3D Printing

ASUS AURA SYNC

3D PRINTING FRIENDLY
MAKE IT YOUR OWN

ASUS Australia & New Zealand

www.asus.com/microsite/Intel-Coffee-Lake-Best-Z370-Motherboards/AU/

THE BEST MOTHERBOARD BRAND – BEST-SELLING, EASY TO USE, STABLE, TRUSTED

ASUS

LIAN LI REVEALS NEW PC-O11 DYNAMIC CASE

It's blocky, but it's good!

If one tempered glass panel is considered cool - and that's certainly the current meta when it comes to enthusiast chassis design - then do you know what's even cooler?

TWO TEMPERED GLASS PANELS!

That must be the thinking behind Lian Li's new PC-O11 PC Dynamic case, and to be honest, it certainly looks pretty damn striking. Both the side panel and front panel are tempered glass, allowing you to either show off your cabling and PC building skills with elan, or live with ongoing mockery as all and sundry can see how little you care for neat builds (hint: I am the latter.)

The PC-O11 Dynamic uses a multi-chamber design to isolate components and cabling - so maybe even I could build a neat PC for once! Having the drives and PSU in a separate chamber also helps reduce overall heat build up. There's also room for up to three 360mm radiators for liquid cooling, along with four dust filters and 120mm or 140mm fans, and the case comes with a vertical riser so you can show off your high-end video card for all to praise and drool over.

And if you really want MOAR POWER, you can mount a second power supply. There's also a USB3 Type-C connector along with the usual front panel IO ports.

The PC-O11 Dynamic retails for $US129.99 in black or white, and will be available soon.

WESTERN DIGITAL REVEALS NEW GAMING-FOCUSED NVME SSDS

Surprise, surprise - they're pretty damn fast.

Western Digital - who I SWEAR was insisting on being called WD not too long ago - has just lifted the lead on a new range high speed storage options aimed the only part of the PC hardware market that's experience anything like growth - gamers.

The new Western Digital Black 3D NVMe SSDs comes in 256GB, 512GB, and 1TB models, retailing for $169, $325, and $609 respectively. The two top-end models boast read speeds of up to 3400MB/s, and the 1TB model features write speeds of up to 2800MB/s.

The other models presumably have... less.

The 1TB model can also handle up to 500,000 IOPs, and they all come with a five-year limited warranty. Wait, no, not all of them, only the 1TB model.

"Today's gaming applications require increasing capability from their PCs, and this will only continue to advance. With our new architecture and controller, the Western Digital Black SSD integrates our 3D NAND technology with the NVMe interface to enable new levels of performance. Whether it's a new gaming rig or a video-editing workstation, our innovative NVMe drives will power many existing and future environments that enable data to thrive," said, Mark Grace, senior vice president, Devices Business Unit, Western Digital.

The drives are available now, so get upgrading!

CORSAIR'S JUST DROPPED SOME SEXY NEW DOMINATOR RAM

High contrast, high desirability.

If your next PC build is going into a case with one of those lovely, high contrast black and white interiors (Fractal Design comes to mind, as well as some of Corsair's chassis), then Corsair's new special edition RAM kit could be the crowning glory of your new rig.

The new kits come in 2x 16GB and 4x 8GB varieties, and boast a clock speed of 3466Hz, built on Samsung memory modules and a 10-layer PCB. But there's more to the Dominator Platinum Special Edition Contrast than just speeds and feeds.

The sticks come in a pretty neat pearlescent finish, with a black top bar with built in white LED lighting. And each kit is individually numbered, for even more bragging rights.

The kits are pretty hard to get, though, and are only available from Corsair web stores in the US, UK, and Germany. The 2x kit retails for $US439.99, and the 4x kit for $US479.99.

THE ULTIMATE GAMING BUNDLE

The OriginPC and AOC **Neuron Esports PC Gaming Bundle** delivers everything you need to take on the world's best and come out on top. Now you can **customise your system** to game like the pro's.

CPU: INTEL CORE i3 / INTEL CORE i5 / INTEL CORE i7

GPU: UP TO NVIDIA GTX 1080Ti

SSD: 120GB / 240GB / 480GB

RAM: 8GB DDR4 / 16GB DDR4 / 32GB DDR4

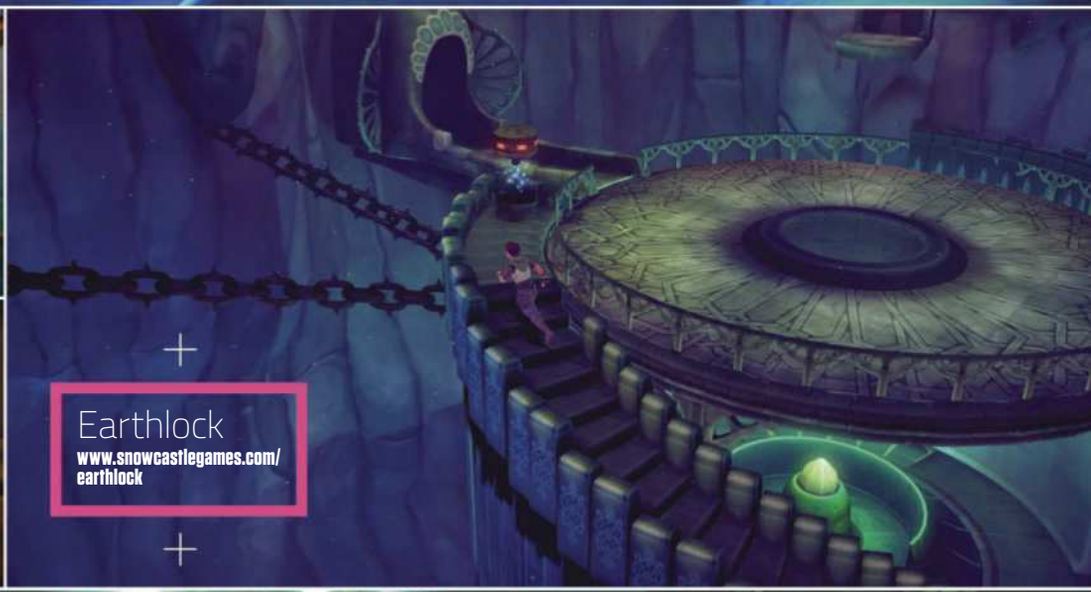
24" AOC Gaming Monitor + Keyboard + Mouse

ORIGIN intel AOC NVIDIA.

Follow Us @originpc | | www.originpc.com.au

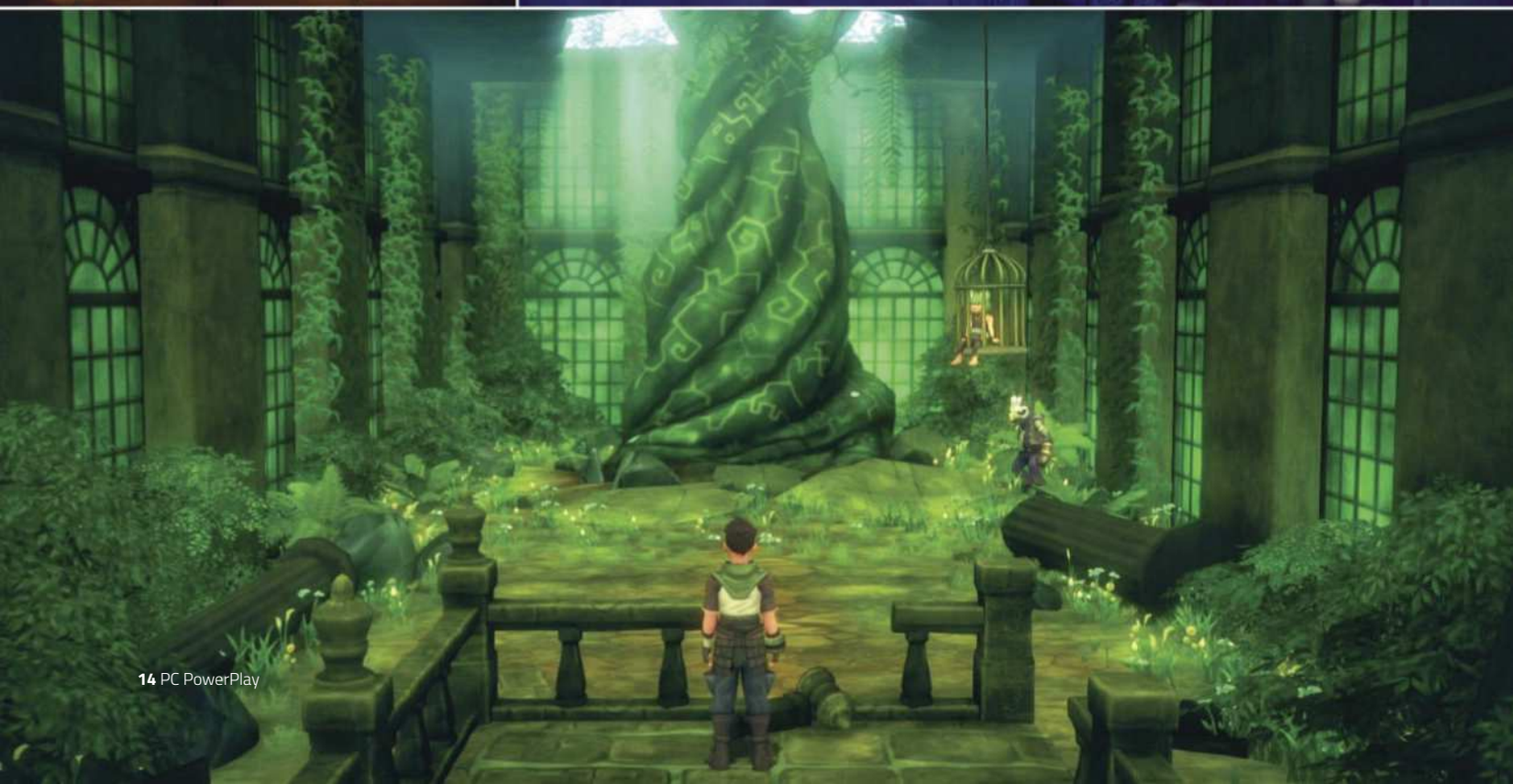
@2018 ORIGIN PC Corporation all right reserved. ORIGIN and the ORIGIN 'O' symbol are trademarks of ORIGIN PC Corporation. All other trademarks are property of their respective owners. *or any other world. The Human Race Will Always Prevail..

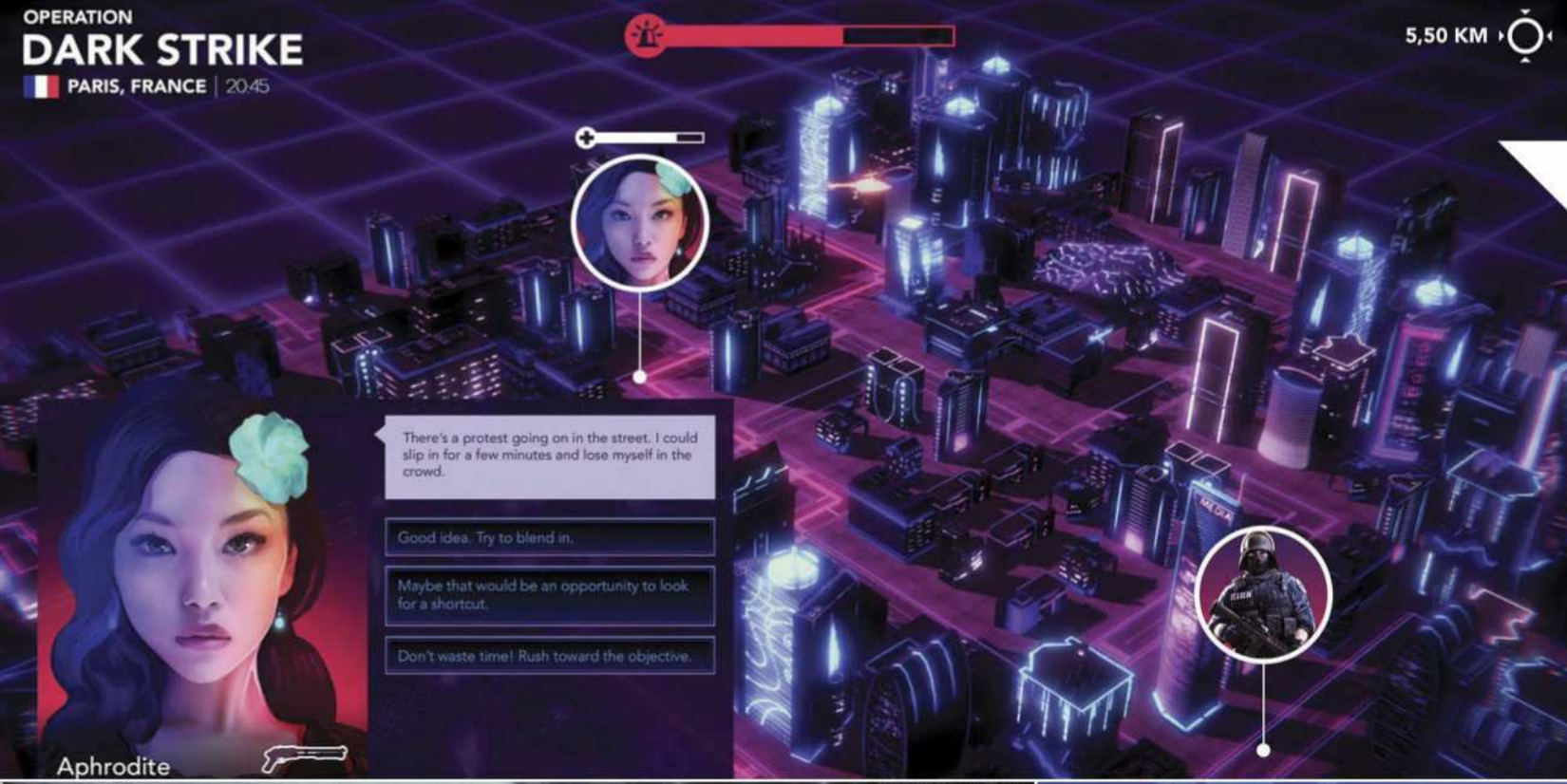
eye candy

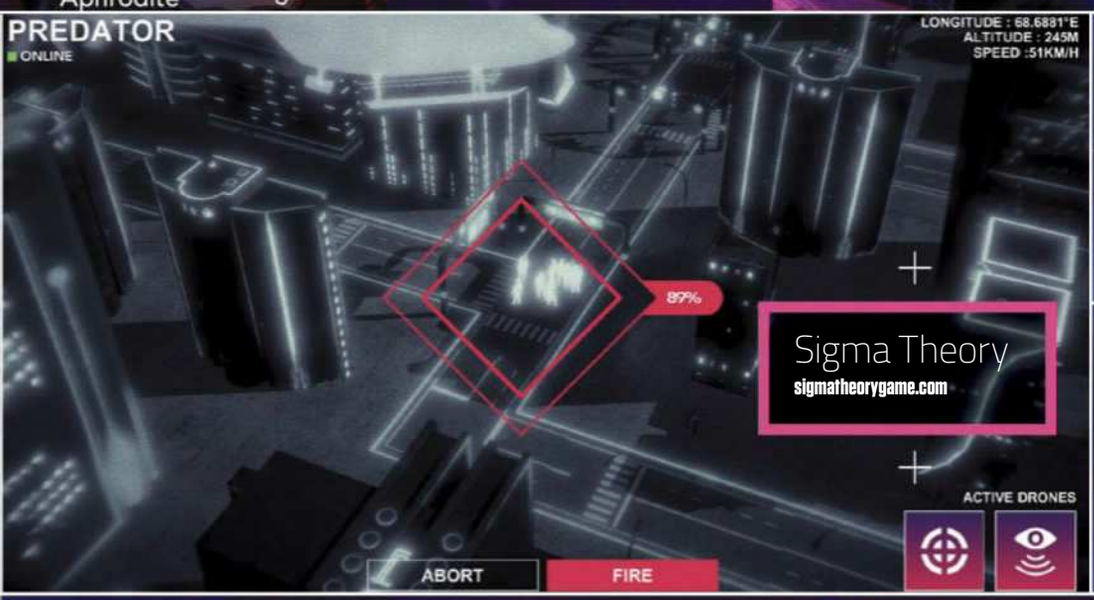


Earthlock

www.snowcastlegames.com/earthlock




OPERATION
DARK STRIKE
PARIS, FRANCE | 20:45
5,50 KM
There's a protest going on in the street. I could slip in for a few minutes and lose myself in the crowd.
Good idea. Try to blend in.
Maybe that would be an opportunity to look for a shortcut.
Don't waste time! Rush toward the objective.
Aphrodite


PREDATOR
ONLINE
LONGITUDE : 68.6881°E
ALTITUDE : 245M
SPEED :51KM/H
89%
Sigma Theory
sigmatheorygame.com
ACTIVE DRONES
ABORT
FIRE

.88888888
6 6
BIOGRAPHY
Yi Tao Xu has lived a thousand lives and a thousand adventures. He has stolen suitcases full of Triad cash from their own casinos in Ningbo, danced on the British Prime Minister's deck and Snapchatted it, and when a tsunami is looming, he reaches for his surfboard. He lives every day as though it were his last, and it often very nearly is. He is capable of anything... whether you like it or not.
Geographic Knowledge
TRAITS
Seduction Artist
Loyal
Start recruitment
.MAESTRO
5 5
.SAINT
7 4
.APHRODITE
5 4
.GAMORA
7 1
.VENOM
6 5
.TIGER
5 6
.88888888
6 6
.DOUBLE K
8 1

Creature of Havoc

The failure of LawBreakers gave Clifford Bleszinski a wonderful gift: Desperation!

In December 2017 Cliffy B's long-time collaborator Arjan Brussee (Killzone, Jazz Jackrabbit) left the studio they had built together. In January 2018 publisher Nexon wrote off its investment, and in April Boss Key admitted that LawBreakers was such an utter farrago that it wasn't even worth re-launching as a free-to-play title. At this point a lesser man might've quit, but Cliffy B did not.

Within four months of the launch of LawBreakers he realised that the only way he could keep the lights on at his studio was to create an entirely new product, and in five short months he did just that. April 10 saw the launch of Radical Heights, a 'Battle Royale with cheese' – a direct competitor to the BR juggernauts of PlayerUnknown's Battlegrounds and Fortnite.

It would be easy to list the flaws in Radical Heights. There's the garish and uneven textures, the lag, the long lobby wait times, the conflicting design elements, the wafer thin veneer of satire, the unproven economic model, and so much more.

It's also worth noting that Radical Heights is the antithesis of everything that LawBreakers stood for. In his last game Cliffy B eschewed the cartoonish frivolity of Overwatch with something "a little more Quentin Tarantino," and while he didn't want to over-charge his customers ("none of that US$60 multiplayer-only bullshit") he certainly didn't want to sully the experience with free-to-play exploitation.

Yet here we are. Cliffy B is gradually learning about what today's gamers want to play, and all it cost him was years of his life and millions in squandered investor dollars.

Criticism comes easy, but it would be foolish to write off Cliffy B. He is very well connected, he is independently wealthy, and crucially, he glories in the infamy that his antics attract. For he has long understood the power of social media, and how the image you cultivate in the minds of the public creates its own reality.

Consider the career of another veteran game designer: Mark Kern, one of the pioneers at Blizzard. If you were only to follow him on Twitter, you might know him as an outspoken jokester, a foe of sex-negative wowserism, and a champion of free speech. You might think highly of him for his efforts to get Blizzard to bring back Vanilla World of Warcraft servers.

> "Reality flows from belief, induced from electronic stimulus, infinitely scaleable"

But there's another Mark Kern – the Mark Kern that (allegedly) ran Firefall into the ground. The Mark Kern that was (allegedly) a nightmare to work with, distant and erratic, only showing up at the office occasionally to (allegedly) demean his underlings' efforts. The Mark Kern who blew US$3 Million on the Firefall Bus, a mobile LAN chamber that was mothballed for most of the game's life. The Mark Kern who spent countless marketing dollars on expletive-laden Game of Thrones music videos for the Firefall YouTube channel.

So: which of the two Mark Kerns is the real one? If you only know his name from the occasional viral tweet scrolling down your feed, then Good Mark Kern isn't just The Real Mark Kern, he's The Only Mark Kern. Thus he is assured a steady supply of dopamine from all your Likes and Re-Tweets, and he'll start with his best foot forward when it's time to launch his next game, a giant-robots-versus-kaiju MMO that actually looks somewhat promising.

This is the reality of 'cyberpunk' in the year 2018. Reality flows from belief, induced by electronic stimulus; infinitely scalable, infinitely malleable.

In this environment information asymmetry reigns supreme – and even Blind Freddy can see why Valve recently tinkered with the Steam privacy settings: to destroy Steam Spy. The multitude of stats made available by Steam Spy didn't just benefit consumers, they empowered smaller devs in their negotiations with publishers.

Steam Spy creator Sergey Galyonkin put it thus: "In any market, if you have information asymmetry, it's bad for some of the parties that engage in any market transaction. Imagine buying a house without knowing the price of the house. Imagine signing a contract with a basketball player without knowing their performance in past games." The juggernauts at the big end of town will still be able to afford their own market research, but the indies are already suffering.

Without Steam Spy indies will fare no better than the contestants of a deadly near-future game show, fighting for their lives in a garish and incomprehensible kill-dome – 100 contestants enter, only one leaves.

That person may yet be Cliffy B, for he knows well the power of information asymmetry. It's how he was able to make a fortune from investing early in Oculus Rift... . PC

JAMES COTTEE is also fond of your likes and clicks. Like this spot on the page now by rubbing it with your finger!

msi®

NVIDIA GEFORCE® GTX

WORLD'S FIRST 144HZ THIN BEZEL GAMING LAPTOP

GS65 Stealth Thin

144Hz 7ms

Gaming Keyboard by steelseries PER KEY RGB

DRAGON CENTER
Exclusive Gaming Mode

| WINDOWS 10 HOME/ WINDOWS 10 PRO | INTEL® CORE™ i7 PROCESSOR | GEFORCE® GTX 1070/1060 |

10 : GAMING PERFECTED GEFORCE® GTX 10-SERIES VR READY NOTEBOOKS

WHERE TO BUY

NSW		
Capitol Computer	(02) 9281 8890	http://www.capitolcomputer.com.au
Wireless1	(02) 96878 828	http://www.wireless1.com.au
Mwave	1 300 727 446	http://www.mwave.com.au
Kong Computers	1 300 159 272	http://www.kongcomputers.com
JW Computers	(02) 9726 2818	http://jw.com.au
Dcomp Online	(02) 4721 3457	http://www.dcomponline.com.au
Shopping Express	(02) 8338 8899	http://www.shoppingexpress.com.au
Digital Star	(02) 8748 6888	http://www.digitalstar.com.au
PC Byte	(02) 9723 0306	http://www.pcbyte.com.au

SA		
Get Right	(08) 8231 0622	http://www.getright.com.au
IT Warehouse	(08) 8296 3211	http://www.itwarehouse.com.au
All Needs	(08) 8211 8661	http://www.allneeds.com.au

VIC		
Tecs	(03) 9602 3499	http://www.tecs.com.au
Scorptec	(03) 9249 6000	http://www.scorptec.com.au
PC Case Gear	(03) 9560 2122	http://www.pccasegear.com
PLE Computers	(08) 9309 4771	http://www.ple.com.au
Centrecom	(03) 8311 7600	http://www.centrecom.com.au
BCC Computers	(03) 5227 6888	http://www.bcccomputers.com.au
CPL Computers	(03) 92234288	http://www.cplonline.com.au
Prototech	(03) 5444 1980	http://www.prototech.com.au
Umart	(07) 3369 3928	http://www.umart.com.au

WA		
Affordable Laptops	(08) 9536 8500	http://www.affordablelaptops.com.au
PLE Computers	(08) 9309 4771	http://www.ple.com.au
Austin Computers	(08) 9202 0100	http://austin.net.au

QLD		
Umart	(07) 3369 3928	http://www.umart.com.au
Computer Function	(07) 3720 4777	http://www.computerfunction.com.au
Computer Alliance	(07) 3421 3200	http://www.computeralliance.com.au
GameDude Computers	(07) 3387 1500	http://www.gamedude.com.au

NEW ZEALAND		
Just Laptops	(09) 442 2066	http://www.justlaptops.co.nz
Computer Lounge	(09) 368 4818	http://www.computerlounge.co.nz
Playtech	(09) 415 1020	http://www.playtech.co.nz

NATIONAL RETAIL		
JB Hi-Fi		http://www.jbhifi.com.au

*Performance result may vary on different configuration. Product features and specifications may vary by model.

© 2018 NVIDIA Corporation. All rights reserved. NVIDIA, the NVIDIA logo, the GeForce GTX logo, GeForce, are registered trademarks and/or trademarks of NVIDIA Corporation in the United States and other countries.

TRUE GAMING

MAKIN' TRACKS

We talk World of Tanks 1.0 with the tank-crew from Wargaming Sydney - Expert Software Engineer **CAMERON HART**, and Lead Software Engineer **SCOTT MCMILLAN.**

WHO CAMERON HART & SCOTT MCMILLAN
WHERE WARGAMING SYDNEY
WHY WORLD OF TANKS 1.0

World of Tanks has gone through a lot of changes, and I've been lucky (except for those changes I didn't like, unlucky, I guess) to see a lot of them. I've been playing since the beta days, when Wargaming was just a bunch of ambitious Russians in a cramped flat making solid, if niche, strategy titles. Since then it's been a weird ride, watching Wargaming grow to become a global juggernaut, swallowing companies whole that once upon a time dwarfed it by entire orders of magnitude.

And one of those companies is – or, more accurately, was – Australian massively multiplayer specialist Big World.

Big World is now better known as Wargaming Sydney, and I recently got to visit its office, and the transition into the Wargaming family is boldly writ on every feature wall with a tank blueprint on it. While the name may have changed, though, the company is still using its expertise to keep pushing World of Tanks (and Warships, and Warplanes, and… even some things I was very carefully shuffled away from) ever forward. The reason for my visit was to sit down with some of the crew to get a walkthrough of the newest content update for the game, which sees World of Tanks tick over into World of Tanks 1.0.

But does it change the game? Not really – this update is all about good looks, though there is now a radical sense of a much greater scope in the game. Every map now feels a lot bigger, with horizons that seem to stretch off forever, while the textures of everything close up feel more intense. Nothing has actually changed, but the combined effect is impressive. During my visit, I got to speak with Expert Software Engineer Cameron Hart, and the very clued in Lead Software Engineer Scott McMillan. So, I was curious…

Why such a big cosmetic update? Cameron looked at me like I had asked a dumb question.

"It just looks cool?"

Which, when you get down to it, is a pretty fair answer, and it does look *really* cool. As some of the team zoomed about a map showing off super-sekrit Wargaming cheat codes and blowing each other up, they walked me through some of the changes.

"You can now see the shot trails when tanks fire, and when you're in water, you can see the ripples from the blast of each shot," Cameron points out. And while it doesn't change the game per se, it changes player's reactions. "You'll see in a proper meadow with a lot of tanks like these really, really easy shot trails to spot."

Up-rezzed, too, are tank tracks, which look a lot more realistic. "Particularly on the snow maps. Probably the sand maps as well - there's a lot of more deformation of the terrain with a tank. Even the grass on the ground, it's a completely new system. It's much deeper, and the same with the trees, too."

But it's the game's lighting engine that's received arguably the most work, and Scott really warms to the task as a few more tanks meet their early demise.

"The lighting system is completely redesigned," he pointed out. "The game's got global illumination now. If there's a red item next to you, and you move next to it, you should get that light bouncing off your

tank. It's not something that you really notice is missing until you turn it off or something like that. It just makes things look a lot more believable and realistic."

"And another new thing is that particles now cast and receive shadows," Cameron adds.

"And the particles receive shadows and they're subject to the global illumination, and everything. I'll say now they're much better grounded into the world – before they were completely separate system."

Cameron picks up the thread again, as he practically kills himself driving full-speed into a tree. "This is a good example of the shadow detail the engine's achieving now, so you can see the individual leaves in that tree. I don't think you'd see better shadows than this in a game." Which is an odd thing to be hearing in respect

> "...I'll say now they're much better grounded into the world – before they were completely separate system."

to a free to play game, but the shadows in that tree… well, they were pretty impressive. And having it all render while zipping about at high speed even more so. Cameron takes up the spiel.

"It's virtual texturing – it's like there's a big table of small textures. Depending on what direction you're looking the engine decides, okay, I'm going to allocate 20 tiles for this area that's near the camera, so it's really good at balance. That's why you can get such sharp textures on the ground and the spot that you're looking at. The whole time it's just continually shifting around and creating new pieces of shadows to make sure the shadows that are on the screen… it's quite a giant texture, 8,000 by 4,000, or something like that, to deliver that detail. But, because it's only updating little pieces at a time, it doesn't really matter that it's so big."

Of course, for all that it is cool – and it got me playing again, which I hadn't done for months before catching up with the Sydney team – why do it now?

"Well, for us, this is kind of the end of the beginning of 1.0 for us," which is, I guess, a way of saying that there's a lot more to come in World of Tanks, and a lot more fine-tuning, balancing, and continual development that has marked the rise of World of Tanks as a major player in the industry.

Can't wait to see what happens on the way to 2.0!

DAVID HOLLINGWORTH PC

Where's Kevin?

There's a special horror to games that don't explain what's coming next.

You know how games elegantly signal danger, so that unexpected twists never feel unfair? Into the Breach, which I wrote up in this month's indie pages, is a masterclass in this method of design. The first time you meet a new boss, you know what terrible things it can do because it's doing familiar, just bigger, terrible things. And if you're still not sure, you can select it and read explicit details. Then, at the beginning of every turn, it heralds its next attack perfectly in red, anyway. Theoretically, you could win Into the Breach the very first time you play it.

But what about the games that don't signal danger at all? I've written about RimWorld before; how to survive on an ice sheet (by eating people), and why it's basically The Sims (only with more cannibalism). I already loved the game but, in the lead up to an actual 1.0 release, they're adding some amazing (and terrible) things. RimWorld has never bothered to herald impending doom. That's kind of the point. You learn from supposedly foreseeable errors, like failing to adequately stock the fridge for winter, only to learn the spring corn won't grow fast enough.

I'd grown pretty cocky about my ability to survive on an unmodded RimWorld, even on the harder difficulties. Movement around the world map, however, has reminded me that misjudging context has consequences. Consider Marjot and her lover, Kevin, who she never actually mentioned until he sent a distress call one year into playing on tundra. 'Yes, Marjot.' I said. 'Of course we are saving your lover, Kevin, who we didn't know existed. We have enough raw rice for you to make a seven day journey over snow. It'll be miserable, but worth it. Godspeed.'

Now, if you want to discover RimWorld's Incapacitated Refugee event for yourself, I won't be offended if you stop reading here. I wouldn't want to detract from the unique dread I felt when my colony's pacifist researcher eventually reached her destination, grumpy from raw meals, and found a suspicious looking mountain. The colony had been going about their business, butchering emus, making emu leather pants, subsisting on insect jelly because Marjot took all the rice, when Marjot radioed in. 'So, there's a door. And a guy called Bruce. Where's Kevin?'

Bruce had a heavy SMG and Marjot initially avoided him, gathering wildberries, chopping down trees and cobbling a wooden door onto an abandoned room. Soon, Bruce was joined by eight heavily armed other people. They patrolled ominously, near the door. Marjot was both freezing and starving, went over to say 'Hi' and was immediately killed. Generally, RimWorld is more fun with a permadeath attitude, but it was such an effort to get her there, I loaded a save. Marjot 2.0 then tunnelled painstakingly through the back of the mountain but alerted them as she hit a wall.

> So I'm learning how to navigate an open Rimworld with a mix of awe & terror

Subsequent iterations of Marjot tried to sneak in when the gun-toting not-Kevins were asleep, but you have to attack enemy doors, you can't open them. Attacking any part of their structure alerts everyone. I eventually loaded to before she'd left home and sent the two strongest fighters to get Kevin instead. In terrible moods from raw rice, they just couldn't beat the pirates, no matter how cheesily I set their solar panels on fire. I tried probably forty times before I opened the cheat menu. After Bruce and his stupid cronies were vaporised, I found Kevin tied up inside.

No, dear readers. I didn't rescue Kevin by cheating. That would be very wrong. I'd never be able to play RimWorld again. After all that effort, I just wanted to see Kevin's beautiful face one time. It was so beautiful. Then I loaded to before Marjot had embarked on her journey and we left Kevin to his terrible fate. Marjot became very sad. To be precise, she was (cumulatively) 'my friend Kevin died' (-3) sad, 'my lover Kevin died' (-16) sad and 'failed to rescue Kevin' (-20) sad. Only two things in RimWorld can fix that kind of sad. One is Kevin, the other is a joywire.

I wasn't advanced enough to solve Marjot's sadness. We were still subsisting on insect jelly and trying not to be eaten by insects, remember? What I learned from this experience is to make Packaged Survival Meals. And that literally every innocuous sounding map event is terrifying, including most of the mining opportunities. You can also tame muffalo to carry items, or build pod launchers. You can even found a second, concurrent colony, which is amazing because it can be properly planned, rather than hastily thrown together between raids.

So, I'm learning how to navigate an open RimWorld with a mix of awe and terror. I sent a married couple on a mining honeymoon via space pod. Marjot took gunfire to the brain. She's not great at researching any more. She's still sad. I don't want to talk about it, now. PC

The description of the sculpture **MEGHANN O'NEILL** would make in RimWorld might read, 'This work bears the representation of a games reviewer eating cereal for lunch. She is looking to the left, as if for the lover she never returned to a sad woman. Every shape in the image seems to be hexagonal.'

RESISTANCE **FULLY CUSTOMISABLE**

GAMING NOTEBOOKS

intel CORE i7 7th Gen

RGB

NVIDIA G-SYNC

FEATURING INTEL 7TH GENERATION CORE i7 PROCESSORS!

VR STRIKER 4K - AVAILABLE FROM $2,199

Powered by NVIDIA 6GB GDDR5 GTX 1060 Graphics and 4K Display

VR ENFORCER - AVAILABLE FROM $2,799

Powered by NVIDIA 8GB GDDR5 GTX 1070 Graphics & G-SYNC

VR FURY 1080 - AVAILABLE FROM $4,599

Powered by NVIDIA 8GB GDDR5 GTX 1080 Graphics & G-SYNC

ALL RESISTANCE GAMING NOTEBOOKS FEATURE:

- 16GB DDR4 Memory, 256GB M.2 SSD and 1TB 2.5" HDD as standard
- RGB Programmable Backlit Keyboard
- Full HD IPS panels with G-Sync
- 2 Years Australia Wide Onsite Warranty with Full Australian Support

FULLY CUSTOMISE YOUR NOTEBOOK AT WWW.RESISTANCE.COM.AU

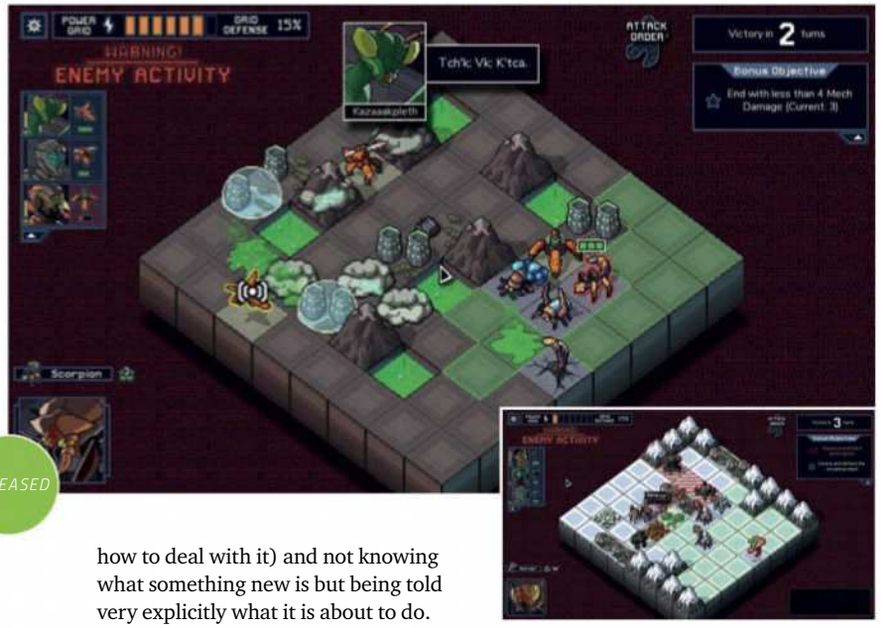
RESISTANCE

A Collection Aside

The indie pages aim to connect readers with unique, inspiring and unusual experiences. With so many games being released, there really is something for everyone out there, if you just know how to find it. **MEGHANN O'NEILL** has become many colourful characters over the past two months, including mech pilot, maker of pies, mammoth mother, lap swimmer and square. Is she having an identity crisis? No, but people are asking why she can't stop talking in a Yorkshire accent. Read on to learn why.

INTO THE BREACH

DEVELOPER SUBSET GAMES • **PRICE** US$15
subsetgames.com/itb.html



RELEASED

In 2012, Subset Games released its real-time strategy hit, FTL. I had no expectations for what its second game might be, other than assuming it would be good, but it's actually quite a similar experience. Into the Breach may be turn-based and set in time rather than space, but many aspects are familiar. For example, in FTL, the failure of the ship's hull signalled your demise and this is how the power grids function in Into the Breach. Subset has reworked everything that was great about FTL while further polishing every aspect of design.

In a minimalist, storytelling nutshell, Vek are terrorising humanity. You play as three mech pilots, fighting to save people and infrastructure on 8x8 grids, over five turns. Collateral damage is inevitable and personal when kids yell, "Mom, look!" and Grandpa runs to get his glasses so he can see the famous heroes in battle. Of course, the more abstract (and cute) people you prioritise saving, the less likely you are to collect power cores and preserve experienced pilots. If you can't stay alive, you're required to abandon a whole timeline to their fate.

Content isn't drip fed by luck (as in FTL) and unlocking content requires engagement with different facets of the game. You can buy squads of mechs with coins collected by way of achievements like 'Get 9 reputation points on a single island.' This encourages experimentation, especially as you unlock more squads. The second squad I used was so different to the first I felt like I was playing a whole other game. The Rusting Hulks may initially appear weak and hard to manipulate, but their passive ability (to electrify smoke in the desert) is amazing.

Similarly, new Vek are introduced gradually and it's not clear how this happens. After many hours of playing, I suddenly got spiders who shoot webs and eggs. Did I change the difficulty, unlock a new squad, hit a number of achievements? I'm not sure. Gameplay is an interesting mix of not knowing why something new has happened (but definitely knowing how to deal with it) and not knowing what something new is but being told very explicitly what it is about to do. Indeed, the way Into the Breach heralds its every next move is incredibly clever.

So, for example, if you're playing chess, you've learned how pieces can move. You look to see what your opponent can immediately threaten. Into the Breach allows you to see every unit's next attack on the gameboard in red; where it will occur, whether it's ranged, how large the area of effect will be. If you know one Vek is emerging and three buildings are threatened, can you block the emerging Vek (taking damage) or do you need all three mechs to defend the buildings? Can you sacrifice a building to avoid being overwhelmed next turn?

In outlining what is most special about Into the Breach, I've hardly touched on its scope, so I'll rush through some details. I believe there are 15 enemy groups, with several variations within each, all with unique active and passive abilities, like how psions might add +1 Vek health or make every Vek explode on death. You can unlock 11 squads or customise one from available mechs. Pilots have unique skills, like being able to spend one power to move after attacking, and can earn experience individually, from killing Vek, to unlock more.

> "Into the Breach allows you to see every unit's next attack on the gameboard in red..."

Finding power cores and shopping after beating an island can allow for mech customisation as each game progresses, with an extensive range of weapons (maybe 60) and abilities (passive and activated) to try out. I particularly like Medical Supplies which allow pilots to survive if their mech falls, as they would usually be replaced by an AI pilot. Full of goodies, Into the Breach is a very well-balanced and thoughtfully crafted game, accented by evocative, minimal storytelling. It comes with my strongest recommendation. Don't let any more tiny people die.

YORKSHIRE GUBBINS

DEVELOPER STAIRFALL GAMES • **PRICE** US$5
stairfallgames.com

RELEASED

Okay Bertrella, hand over the meat.
Please may I have MY Special Meat?
Is this is a bad time to ask for some Meat?
Not now Steggy, I'm watching Yorkshire's Fattest Dogs.

Occasionally, a game demo makes me want to recommend it in and of itself. The Preposterous Awesomeness of Everything had a great demo, too. Why is it always adventure games? Probably because a verb interface is inherently hilarious, for newcomers and veterans alike. Yorkshire Gubbins' free demo (which you can play online at https://ayerobot.com/) is a verb school. My character mistakenly thought she was there for a Battlegrounds tutorial and the teacher kept whispering loudly to me, to flesh out instructions. I almost enjoyed it more than the actual game.

In the first of only two small episodes (although more are promised), Steggy wants to make a pie but she's first required to apologise to her best friend for ruining her wedding. This sounds innocuous enough, until you realise that this northern English town isn't quite as safe, clean and normal as you may have thought. As with Darkside Detective, a little collection of vignettes weaves together a nonlinear, self-referential narrative. In the second episode, you play the incredible events of the wedding itself, after experiencing its aftermath.

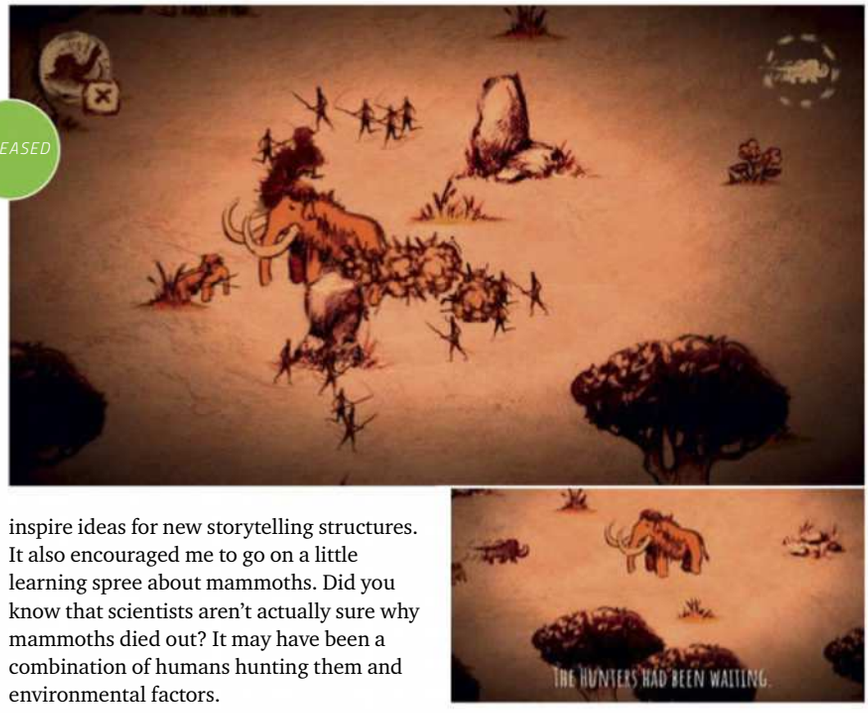
These tiny adventures rely on their puzzles to provide a sense of achievement, but without the frustration that comes from having thirty inventory items and ten locations to navigate. In Yorkshire Gubbins, I got very slightly stuck once, when I hadn't walked far enough left in a scene to notice a backpack. As with any adventure, puzzles are solved in multiple steps requiring a combination of paying attention to what characters say, imagination and real world knowledge. Characters will remind you of what you're supposed to be doing, too.

Largely thanks to the exceptional voice acting and regional accents, I found Yorkshire Gubbins to be extremely funny. One joke was a little tone deaf, but the humour was otherwise surprising, silly and very faithful to its setting. I never found out what a "spork jogger" was, but I expect to meet one in a future episode. I'm a little scared. I'd highly recommend this to adventure fans. Its scope may be small, but music, art and story beautifully support this polished product. If nothing else, get a refresher on how to use verbs in the ridiculous, free, online demo.

THE MAMMOTH: A CAVE PAINTING

DEVELOPER INBETWEEN GAMES • **PRICE** FREE
gamejolt.com/games/mammoth/92537

RELEASED



If you've ever wanted to be a vengeful mammoth, now is your chance. Ten minutes long and free, this is a no-commitment, coffee-break experience. (As long as you don't count the survival of your species and its interdependent neighbours as a commitment.) The Mammoth: A Cave Painting is a parable about conflict and balance. Can you win it? I'm not sure, but mammoths are extinct, so probably not. The fact that it feels like you're striving towards a new dawn, nonetheless, is a testament to the sense of agency the game creates.

As far as light interactivity goes, you can toot your trunk and stampede forwards. You can also choose how protective and/or vengeful to be, but that's about it. The narrator comments on the consequences of your choices, as the drawing unfolds on rock. This is a simple game, but could inspire ideas for new storytelling structures. It also encouraged me to go on a little learning spree about mammoths. Did you know that scientists aren't actually sure why mammoths died out? It may have been a combination of humans hunting them and environmental factors.

JUMP GUNNERS

DEVELOPER NERDRAGE STUDIOS • **PRICE** US$15
store.steampowered.com/app/697660/Jump_Gunners

RELEASED

My only ever (real life) experience of gun recoil occurred in a friend's backyard while shooting cans off a branch with a tiny shotgun. It was a few years before the Port Arthur massacre and every teenager I knew still thought guns were cool. Not so much me. I had a sore shoulder. I feel like I should be able to recall a game where recoil is a primary method for movement, but I'm struggling. My kids play Jetpack Joyride, yet Jump Gunners doesn't feel like that. It's more that the guns feel very powerful and you're required to use recoil creatively.

In the single player campaign, there's a level where you have to propel yourself backwards over spikes. Then there are spikes on the ceiling, too, so you have to angle your gun extremely precisely. As soon as you veer towards spikes and panic, moving your gun an inch, you're dead. Initially, this made me crazy, but by the time I got to a level which is basically a tube whose every surface is covered in spikes, I was surprisingly good at it. The game promises that it is 'easy to learn, difficult to master' and then frames your journey to mastery incrementally.

As such, if you want to beat your friends in one of the game's multiplayer modes, including deathmatch, capture the flag and turkey hunt, practice helps. When I played with my family, people initially won by frantic luck. Later, I could play calmly and win. Different weapons have a meaningful impact on your recoil-based movement, too. One thing that irks me about platformers is just slightly failing to make the same jump several times. Here, you simply angle the gun down for a boost. Frustrating wall jumps aren't even a thing either, if you shoot down.

Having left my teenage years behind, I no longer have friends with guns. I do have a middle aged friend with a 'gaming cabana', however. It's next to the pool, full of snacks and it's where he plays shooters without waking his kids. Jump Gunners is the kind of game he needs in there. No sore shoulders, only an arcade aesthetic and some enjoyable single or local play. Having been the girl with sore shoulder, I wasn't expecting to become so good at maneuvering myself with recoil. Jump Gunners teaches its unique mechanic very well.

RELEASED

SWIM OUT

DEVELOPER LOZANGE LAB • **PRICE** $6
store.steampowered.com/app/662200/Swim_Out

I love swimming laps of the pool, back, forth, back, forth. It's great to mull life over, in water, then feel all fresh and reborn, eventually emerging for coffee. I swim at 9am, after dropping the kids to school because that's the only time I can guarantee a lane to myself. Did you know, in South Australia, the custom is to tap people on the foot when you pass them? I nearly drowned in horror when someone tapped me. Anyway, Swim Out is a puzzle game about accidentally swimming laps at the wrong time of day and regretting it forever.

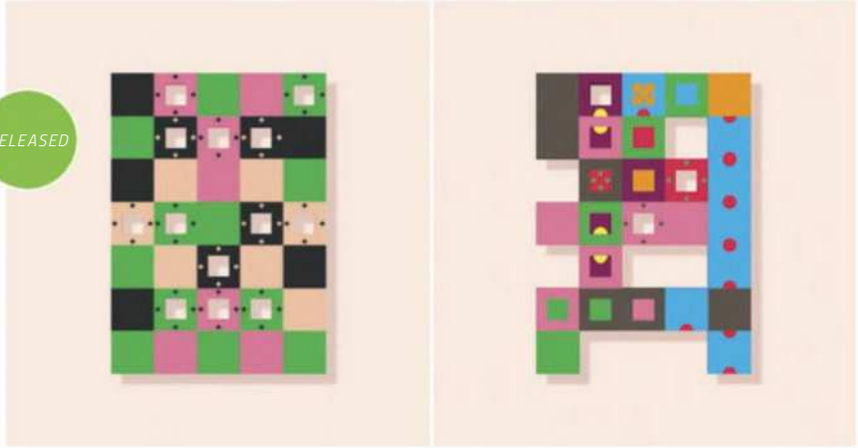
I mean, there's a level where there's a bunch of women swimming with noodles and every passing swimmer that gets hit in the face sinks to the bottom of the pool, never to be seen again.

Sure, you can use flippers for a speed boost or take people out with a beach ball, but can you avoid the painful kid who is skipping stones? You'd think a kayaker could give way in a public pool, for goodness sakes. This ridiculous game of turn-based, lap-swimming Frogger stressed me the hell out. There are so many levels. I should go for a swim and relax? Um, no.

DISSEMBLER

DEVELOPER IAN MACLARTY • **PRICE** $5
dissembler-game.com

RELEASED



In 2013, everyone was raving about Stickets by Wanderlands. It looked like a simple, colour-matching game but I sucked at it. Somehow, I just can't play the Dark Souls of mobile games on the train to work. Dissembler is similarly deceptive, but I have a different mindset when I play these games on PC. If I'm given a little artwork and expected to make it disappear by flipping adjacent tiles to align three of the same colour, I damn well want to be sitting in my ergonomic chair with a coffee while I struggle to achieve this supposedly simple task.

Some tiles have an outer colour to shed first. Others are bolted into place. The ones with patterns that have to be matched alongside colour make my brain hurt. Not every puzzle is difficult, though. Some are just beautiful. This is the kind of game that breaks me, but I'm compelled to return to Dissembler (repeatedly) for one surprising reason. You're allowed to unlock all of the puzzles at any time. You still have to solve them, you're just not prevented from progressing. This transforms a potentially maddening puzzle experience into a captivating one.

MIKE DIES

DEVELOPER PSYDRA GAMES • **PRICE** US$15
store.steampowered.com/app/696200/Mike_Dies

RELEASED

Hunter: Hello my friend. No, don't be afraid! I'm here to help you! Follow me!
There's something really great over here for you!
Slalom

Everyone wants me to review their games, which is great. I'll be honest, however. Whenever someone sends me a platformer, my heart sinks. There are so many platformers and genuine innovation is relatively rare within the genre. Also, I'm not great at them. My family never really owned the classic consoles on which people spent their childhood practicing. I gave Mike Dies a try because I liked the minimalist art style and immediately knew this was a game I could enjoy. The levels are tiny and regular checkpoints alleviate frustration very successfully.

Why are the levels tiny? This is the tale of a man who's fractured spaceship must be navigated through a convoluted network of teleporters. Design hinges on the idea that if any of Mike's body parts are not contained within the teleporter when it triggers, he will die. I mean, presumably he could lose a finger and survive, but not his head. Indeed, many teleporters are too small to contain his more crucial body parts. If, by touching a thin teleporter in a tunnel, it has started to spool up, he will need to break bodily contact pretty quickly.

The story is told through dialogue, delivered as you play, and by using levels to stage metaphors. If a voice is telling you to run into oblivion, the level will continue forever, so it's wise to pay attention to verbal cues. My favourite moment involved deciding whether to trust the instruction I was being given. As well as meeting characters like a client, angel, demon and eye, Mike calls his partner, Gregory, to explain what has happened. If you enjoy games that widely represent people, these warm conversations thoughtfully depict a gay relationship. So, is Mike Dies a game for people who can't play platformers? Nope. I died more than a thousand times, but a speedrunner has completed this with ten deaths at the time of writing. Someone will do it with none, I just know it. In fact, this is a carefully crafted experience where every game element is precisely organised and timed. The fact that it's broken into tiny chunks simply means it's accessible. It's also much larger than you'd initially think. That small teleporter you ran past ten times already? It's actually just large enough for a guy. Stand in it. PC

10 to Watch

State of Mind

DEVELOPER DAEDALIC ENTERTAINMENT
PUBLISHER DAEDALIC ENTERTAINMENT
DUE 2018
www.daedalic.de

1

▲ There's a distinctly Deus Ex vibe to State of Mind, with its transhuman narrative about the convergence of humanity and machines. But whereas Deus Ex went for a high-res look at the future, State of Mind has a more artistic, almost cartoony take. It almost makes the game look more appropriate, like some lo-res machine-mind simulation.

In State of Mind, you take on the role of Richard Nolan, a journalist critical of the ongoing drive to technological nirvana. As the game progresses into a thriller about the future of society, Nolan will have a LOT of decisions to make – ones that could change the world…

2

The Cinema Rosa

DEVELOPER ATREYU GAMES
PUBLISHER ATREYU GAMES
DUE 2019
www.indiedb.com/games/projection

▼ A lot of people like to play games when problems in their personal lives get too much, so if you're maybe looking for distractions from a break up… The Cinema Rosa may be less than perfect. It's about someone exploring their past and dealing with – you guessed it – an emotional breakup, by exploring an abandoned cinema and exploring what they find within. It looks to have a tonne of psycho-drama, and sounds like a really up game.
Note: No, it really, really doesn't.

Starship Corporation

3

DEVELOPER CORONADO GAMES • **PUBLISHER** ICEBERG INTERACTIVE • **DUE** THIS MONTH
www.starshipcorporation.com

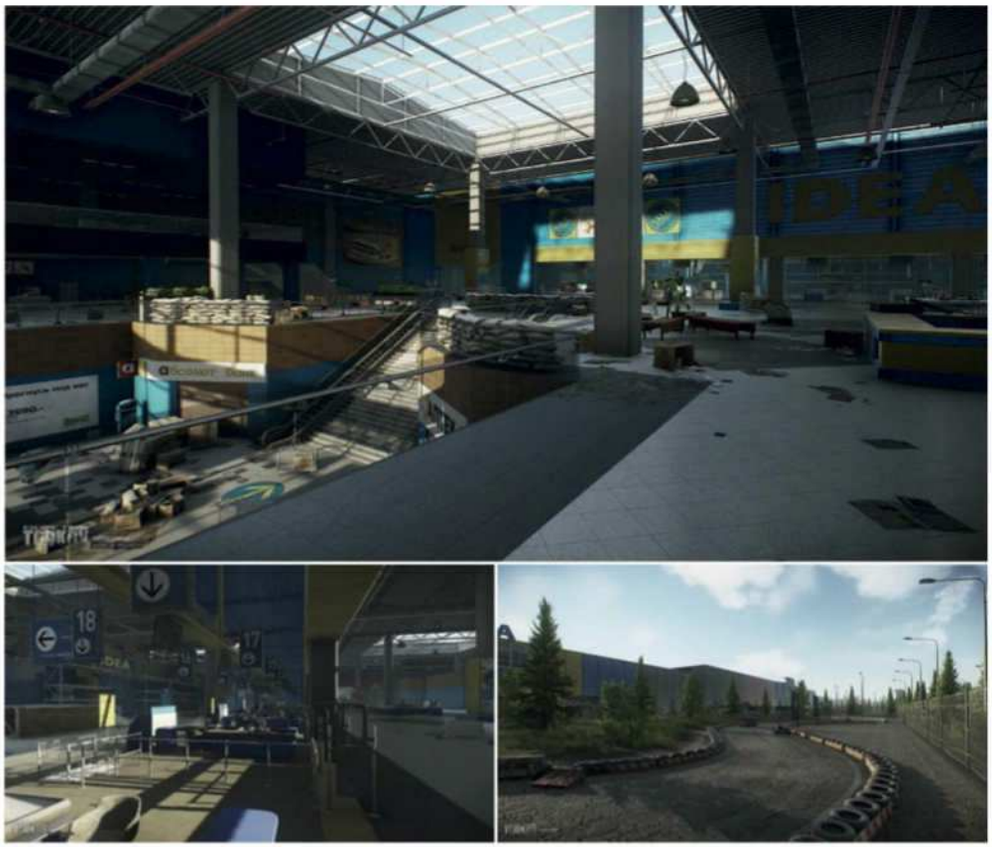
Coming out of two years of Early Access on Steam as we speak, Starship Corporation lets you design and crew a vast starship, and then send it into space. You not only get to design your ship, down to the smallest detail, but also to research new technologies and even open new shipyards as your – ahem – starship corporation expands into new markets. You can also train your crew to handle all manner of incidents, from mining to hunting pirates to boarding actions. The game includes a sandbox mode for endless exploration, as well as 24 missions to complete, and more than 20 different base starship designs. It's not Starfleet, but it comes close.

Last Encounter

4

DEVELOPER EXORDIUM GAMES • **PUBLISHER** EXORDIUM GAMES • **DUE** OUT NOW
exordiumgames.com

Last Encounter is one of those games that gives me sweaty palms just watching the trailer – it's a twin-stick rogue-like built around the idea of a bunch of advanced clones defending the galaxy from some strange alien invasion, which itself clones anyone who tries to fight it… so you need to change up the components of your tiny space fighter constantly. Does it make a lot of sense? Well, no, but the gameplay looks stupidly frenetic, and you can play in co-op mode with few mates, making for even more on-screen mayhem as you take down hordes of deadly enemies and very cranky bosses.



Escape From Tarkov

5

DEVELOPER BATTLESTATE GAMES
PUBLISHER BATTLESTATE GAMES
DUE CURRENTLY IN CLOSED BETA
www.escapefromtarkov.com

Escape From Tarkov is one of those typically Eastern European shooters focused on fidelity of environments and gunplay, and so far it looks to be excelling massively at both. He game is – big surprise – set in the city of Tarkov, and the action revolves around three factions battling it out for control of resources. With gritty first person shooting, and a skill-tree to progress through and gear & items to collect, it feels a little like a grittier version of The Division, with a greater focus on true multiplayer action. And did we say it looks good? Wow, does it look good. Also, very, very brutal.

Iratus: Lord of the Dead

DEVELOPER UNFROZEN
PUBLISHER UNFROZEN
DUE EARLY ACCESS THIS MONTH
iratus.org

6

It's tough being a dark lord – all you want to do is raise a mighty army to dominate all the land, but petty heroes keep getting in the way, rising up and defeating you before you can take that last step towards full command of all life and death… thankfully, being a Necromancer, getting stabbed in the chest is a mere setback, and this time, you're going to win. Iratus places you in the shoes of the villain, tasked with raising a dark undead horde from the body parts of previous victims. The game's a rogue-like – isn't everything these days? – with permadeath, turn-based combat, and dark fantasy 2D graphics. We're guessing, in game, death is not the end, either…

Call of Duty: Black Ops IIII

DEVELOPER TREYARCH • **PUBLISHER** ACTIVISION • **DUE** 12TH OCTOBER 2018
n/a

7

One of the biggest rumours to date regarding the next CODBLOPS is that it may be the first Call of Duty game to ditch the single player game entirely. It feels like a big move, but I can't remember anyone getting all that excited about of the recent outings – for better or worse, CoD is very much a multiplayer game now. What else do we know? Not much at all beyond that, but we're expecting all the usual kill streaks, tight and chokepointy maps, and macho gameplay. Oh, and we also know that Activision and Treyarch have absolutely ZERO RESPECT for Roman numerals. IIII? REALLY?!?!

Serious Sam 4

DEVELOPER CROTEAM • **PUBLISHER** DEVOLVER DIGITAL • **DUE** TBC
www.croteam.com

8

What do we know about Serious Sam 4? Well, not much – so far the game has only really been teased ahead of a more full review at this year's E3, and the teaser trailer… Well, there's a motorbike, there's Sam, there's a pump-action shotgun, and then there's the usual horde of bomb-handed bad guys rushing over the horizon.
So, basically, it looks like we can expect more of the same and frankly that's pretty okay.

Iron Harvest

DEVELOPER KING ART GAMES
PUBLISHER KING ART GAMES
DUE 2018
iron-harvest.com/game

9

▼ Iron Harvest may be based on a boardgame, but the video game version isn't just a digital reskinning – it's a fully-fledged 3D RTS, and it looks pretty sharp. In the game, it's the 1920s, and World War 1 was fought not only with soldiers, but also giant mechs. In the game you can control four increasingly heavy classes of mecha, while still moving squads of more squishy soldiers around detailed, highly destructible terrain. The game raised over $US1 million on Kickstarter, and has got a lot of momentum behind it, as well as strong community to help build the game upon. This could be one of the great RTS games, and we're watching it very closely.

Underworld Ascendant

DEVELOPER OTHERSIDE ENTERTAINMENT
PUBLISHER 505 GAMES
DUE 2018
www.underworldascendant.com

10

▲ Massive choice – that's the main element to Underworld Ascendant (a name that kinda makes no damn sense), being developed by the same minds that brought you Ultima Underworld. You can play in any style, with any mix of weapons; you can use the environment and its denizens, and face up to every challenge in unique ways. As you explore the massive dungeon realm of the Stygian Abyss, even the environments around you will change and evolve, as the narrative itself changes with every decision you make. It all sounds very high-concept, but these guys certainly have the chops to bring it off. Underworld Ascendant may sound ambitious but it's an action RPG we're looking forward to.

TAKE AN ISLAND HOLIDAY, WARCRAFT STYLE!

All the details on WoW's new Island Expeditions from our exclusive hands-on at Blizzard HQ.

Tropical islands conjure glorious imagery. Sandy beaches. Shady palms. Salty goblins ready to cut your throat to beat you to the Azerite.

Yes, this is an island expedition of the World of Warcraft variety, and we have good news from our hands-on access on a visit to Blizzard HQ in Irvine, California. This new feature coming to the Battle for Azeroth expansion is looking like the standout upgrade when it comes to replayable content.

Put simply, if you're the kind of player who doesn't really like PvP but want something more dynamic than running the same raids and dungeons on a loop, this is going to light your fire.

THE ISLAND BROCHURE

When your first character reaches a certain milestone in the Battle for Azeroth War Campaign (expected to be around halfway to the new level cap of 120), it will be time to explore the high seas to bring home critical resources for the war effort. And that's where Island Expeditions will unlock.

Once you have access to Island Expeditions on your first character, it is unlocked for your whole account, so you will be able to dive straight into Island Expeditions as a levelling experience for any characters that follow.

An Island Expedition is a three-player group experience, labelled as 'role agnostic,' so you won't need to make sure you have tank-dps-heal combos to succeed. That said, based on our hands on, having some kind of healing on hand will make things a LOT easier.

It's designed as a PvE experience from the outset, a race against an opposing faction AI team to collect a target count of Azerite from

WORLD OF WARCRAFT: BATTLE FOR AZEROTH

DEVELOPER BLIZZARD ENTERTAINMENT
PUBLISHER BLIZZARD ENTERTAINMENT
DUE 14TH AUGUST 2018
worldofwarcraft.com/en-gb/battle-for-azeroth

"You stab, you roar, and I'll wave my hands in the air, like I just don't care..."

Azerite nodes. The bigger, the better!

the island you've landed on. Expeditions will last around 15-20 minutes.

The islands are dynamic, with enemies, Azerite node positions, weather effects and other points of interest changing each time you play. One island might be lousy with dinosaurs, another with evil cultists or a portal to an elemental boss. Some inhabitants could even give you a quest to complete.

With an opposing team chasing the same target as you, you're basically running against a clock, watching a scoreboard tick steadily toward the target number until someone wins.

A BIT OF BACKSTORY...

Battle for Azeroth is an expansion where Horde and Alliance dive back into all out conflict after two expansions of getting along pretty well to tackle world threatening bad guys from other times and planets.

During the Legion expansion, we've learned that our planet, Azeroth, is actually the name of a nascent Titan because, well, our planet is basically a Titan egg. In the process of finally defeating the big bad boss Titan of the entire Burning Legion, Sargeras delivers a final "SCREW YOU" by thrusting his gargantuan sword into Azeroth, because if he can't have her then no one can. Yep, he's a galactic jerk, but he's imprisoned now, with Illidan acting as his space jailer, so he'll NEVER EVER come back because no one ever comes back from imprisonment in epic fantasy, alright?

So, the giant sword in our planet is now causing Azeroth to bleed out slowly, and this blood is oozing up into the world in the form of Azerite. Funnily enough, the blood of a Titan is very, very powerful, so the Horde and the Alliance are now mining it to gain the upper hand because the other guys started mining it so we'd better mine it too. Things escalate as any arms race is wont to do.

As heroes of the realm, we'll be mining Azerite throughout the BfA expansion, using it to empower our armour with fancy new tricks, as well as offering it up to the faction leaders to fuel open conflict. And no amount of Azerite will ever be enough (until we get to the endgame of the expansion, of course).

SMARTER THAN YOUR AVERAGE AI

What has us so hyped about Island Expeditions is that mobs are looking really dynamic and much smarter than your typical AI cannon fodder. Blizzard is calling them 'Advanced NPCs' and that's a pretty apt description.

The enemy teams are hand crafted, not just random groups of three bad guys. These are named enemies, and they even sport fun team names – Horde teams like Warbraves and Gazlowe's Greasemonkeys, and Alliance teams like Riftrunners and, my favourite, Jaina's Angels. This means you'll get to know certain groups and their team tactics the more you play.

But in general, they're so much smarter than what you see elsewhere in the game (which hopefully means some of these smarts will appear in other places if things go well with this concept).

For example, mages won't just stand there and accept you punching them in their squishy faces. Like any proper mage, they will try to maintain range on you, or blink away to get back to a safe distance while their tougher buddies worry about the melee.

There are even flavours attached to the different teams you will face. Some teams might have an aggressive bent, trying to get up in your space and stop you in your tracks. Others might focus more on playing the island objectives and actively avoiding the PCs to just outscore you for victory. When you land on an island, working out which team you're facing and what to expect from that team could end up playing a big role in success and failure.

PIRATES MUST HAVE THEIR DUBLOONS

Run an island, grab Azerite, hand it over, rinse, repeat? What's in it for us max level PCs? Why, treasure, of course!

We actually don't know much about this side of things just yet, but we know there are faction vendors and a currency called Seafarer's Dubloons that you'll earn from your expedition exploits. So far in the Alpha the vendors will sell you items to make future expedition runs a little easier, which could support your effort to ramp up the difficulty levels.

> "The giant sword in our planet is causing Azeroth to bleed out slowly, and this blood is oozing up into the world..."

These include items like a 'Trick Vest' that shields you for damage before eventually exploding, damaging nearby enemies when its shield is used up. Or items that let healers fire bolts of magical power at enemies every time they heal.

What we're really hoping for are what we hope for from everything in WoW. Collectibles! Pets, tabards, mounts, the works. So far it's just a few helpful items, but any time we see a dedicated currency we have a feeling there'll eventually be cool things to buy if you can collect enough of the stuff.

LOCATION, LOCATION, LOCATION

For all the variety that Island Expeditions promises thanks to the dynamic content, the Blizzard team is also aiming to have a good list of different island destinations to offer us too.

The map we experienced was called Un'gol Ruins, an island with distinctly tropical vibes. From other announcements we've seen elements of a map called Havenswood, which features a dense town to hunt through.

Beyond these, we simply know that the team wants to deliver a good range of map styles, so that in combination with the dynamic content you'll be island hopping for years to come without ever feeling like things are getting stale.

HOW DOES IT PLAY?

In our first three attempts at running an island, we failed. The first was miserable, the second a close finish, and the third actually worse than the second as we hunted for some new strategy to push us over the top, but

STRATEGY TIPS

From our initial experience, here's a few angles on how you should approach an island.

- FIGHTS just slow down your Azerite collection rate. Don't fight without a good reason.
- WATCH your map carefully for the enemy team. Some might even stealth you if you're not watching closely.
- EXPLORE quickly. Azerite visibility on the map is based on your own visibility, so find good places to scout to and from so you're seeing nodes efficiently.
- IF you can pick talents that give you movement boosts, do it. Speed is everything.
- KILL the enemy NPCs wisely. The longer you're alive, the more Azerite you drop. Kill too early and they won't be worth much. And too soon after a previous kill won't help you much either.
- DON'T let the enemy team kill you! Don't feed them your Azerite! Escape is not a dirty word.

WHAT'S UNDER THE HOOD?

Randomly generated content layered onto some standard map designs sounded a lot like the fundamentals of how Diablo 3 procedural generation works.

We asked Ion Hazzikostas, World of Warcraft's Game Director, whether they brought any of the Diablo team technologies or ideas into Island Expeditions. His answer points to a few of the key technologies that underpin Island Expeditions and how this will help WoW in wider ways into the future.

ION HAZZIKOSTAS

For starters, no technology was brought over from the Diablo team, and Hazzikostas emphasised that they prefer the word 'dynamic' over the word 'procedural' because of how they've put their technology together.

"The islands themselves, the terrain, is hand-crafted, and that's one of the hallmarks of what makes WoW WoW," said Hazzikostas. "Every bit of those islands was made by human hands. By level designers, by artists. But in terms of what is spawned there, there's a lot of mixing and matching through the AI system that governs those things behind the scenes."

"The idea is, through the combinatorics of everything that is possible, and intelligent construction of what spawns when, and what events are triggered when, to say nothing of what the AI is doing, there's a lot of potential for variability and it won't ever be the same experience twice."

Hazzikostas says there are two key pieces of technology that have been created for this new game feature. The dynamic system controlling how mobs and events are spawned in the island terrain, and the new advanced NPCs. The advanced NPCs in particular point to some positive benefits to the overall game as the technology is refined into the future.

"Mobs in WoW for the last 15 years have existed for the soul purpose of wanting to walk up and punch you in the face," says Hazzikostas. "That's all they were ever built to do, and every encounter that you ever fight is a designer overriding that base imperative that they all have."

"This was an effort to build new intelligent NPCs from the ground up with more of an eye toward completing objectives, toward positioning, toward pathfinding, toward prioritisation of different goals, and I think it opens a lot of doors for cool things we can do in the future."

instead only found a faster path to failure.

The big issue seemed to be that the AI was being very smart at keeping its Azerite score ticking along at a nice pace. Us humans were first-timers getting caught up in fights that were hard work but didn't earn us much Azerite.

Things also change up around the ten-minute mark, with fresh Azerite nodes appearing and even the chance of new bosses spawning. It gives things that 'phase two' feeling that keeps you on your toes as the race gets closer to the finish line.

Environmental hazards can also get nasty. We encountered blizzarding weather due to some sort of ice boss spawning into the island, which slowed us down when we entered the effect. Another run saw stormy weather dropping lightning zones onto us that could even stun us if we didn't get out in time.

Finding the smart ways to avoid brawling without a good reason will be an important part of succeeding. And that's so refreshing – the 'you win by killing things' story is found in plenty of other parts of this game, so something that requires a little more thought is a welcome change.

This also means communication is going to be an important part of the experience. Sticking together seems critical to success, because it will take teamwork to quickly take down a rare or elite spawn that's guarding a chest full of Azerite and you especially don't want to get caught out of position when the enemy team rounds a corner in front of you.

This does ring alarm bells for joining random group queues. With dungeons and raids, you can learn the routines because they are well defined and always occur the same way. As long as everyone does their job, you'll get there in the end. But this is a

time-based moveable feast of randomised objectives. If you get teamed up with even one person who isn't up to scratch – and who refuses to engage in teamwork – you're heading for failure.

But even at that, a 15-20 minute completion time means one bad run isn't taking up your whole play session. This feels like a sweet spot addition to World of Warcraft that throws in a new variety of play in a game that already has so, so many options for what you might do with a couple of hours of your free time.

At our hands-on preview at Blizzard HQ, one of the most promising signs was how closely the dev team was watching our experiences. We had team members standing over our shoulders, laughing along and offering pointers. But most of all you could tell they were trying to gauge how we were enjoying things. The team was clearly devoted to polishing and tweaking their work to perfection – an attitude that has always seemed at the core of Blizzard games.

It's a pleasure to watch in action and it adds to the sense that Island Expeditions are going to be a truly outstanding part of the Battle for Azeroth experience.

SEAMUS BYRNE PC

YES, YOU CAN RUN PVP ISLANDS TOO!

If you've been reading this and screaming 'No AI is ever good enough for me! I want the truest challenge of all – give me PvP!' well you don't have anything to worry about. Difficulty settings are Normal, Heroic, Mythic, and PvP.

Make new friends on your island getaway.

Actually we lie, pretty much everything in your Island Expedition wants to kill you.

DE(S)CENT BY ANY OTHER NAME

OVERLOAD

DEVELOPER REVIVAL PRODUCTIONS • **PUBLISHER** REVIVAL PRODUCTIONS • **DUE** 31ST OF MAY
playoverload.com

To say that I have fond memories of Descent is somewhat of an understatement. I played it a lot - at net cafes, in the back room of the bookshop I used to work in, and even on my struggling home PC at the time. To say that the upcoming reimagining of the game, designed by the same team, causes those fond memories to explode in a massive burst of nostalgia is also somewhat of an understatement.

Thankfully, there's more to Overload than just that - though it must be said, it is a remarkably… accurate recreation of the original. In the game you're tasked with rooting out mad robots from various moon and asteroid-based facilities, and it's very much still the same six-degrees of freedom action, as you swing and charge past attacked 'bots, dodging incoming fire, and laying down deadly barrages of your own in both tight, claustrophobic corridors and more open arena style areas.

Of course, it all looks a lot better, with full HD textures and some really atmospheric lighting. Enemies spark as impacts strike their casings, and then fly apart in energetic, high-physics explosions, and yes, they do leave behind power-ups for you to top up your shields. It's all wonderfully old school, and the synth-heavy, beat-laden soundtrack doesn't hurt, either.

But the game truly revels in its sense of movement. It is smooth, fast, and always precise, no matter how you engage each fight - circle-strafing enemies with close-in weapons is just as satisfying as standing off at range and hammering them with missiles, and transitioning from each is supremely smooth. I was worried there'd be bit of a learning curve to overcome, but it feels just like the good old days - only a LOT prettier. There's also some handy features, like a holographic mapping aid that can keep you on track for your target, and full surround audio makes playing in good headphones feel like you're literally floating through these robot-haunted mines and space stations.

If you're curious, you can play a demo that's free on Steam. In it, you get a training level, one mission level, and a couple of challenge levels. The challenges are particularly fun, pitting you against ever increasing waves of enemies - truly pulse-pounding experiences. The mission level is pretty much what you'd expect - get from point A to point B - and the training level is useful for those who've never played a six-degrees-of-freedom type game before.

> "We started Overload as a nostalgic homage to Descent, but it's really grown into something more..."

And yes, the very first thing the game asks of you is if you want to keep the X-axis inverted, thank the gaming gods.

"We started Overload as a nostalgic homage to Descent, but it's really grown into something more. We were able to create a deep story with voice, a new challenge mode and add VR support. And all this is on top of graphics and sound we could only dream about 20 years ago," said Mike Kulas, co-creator, Revival Productions, in a recent email.

Matt Toschlog added, "It's been a blast creating this game, and we especially value the relationships we've formed with our Kickstarter backers and Early Access players."

When the full game comes out - and that's the end of May - it'll have a full 15 level campaign, set across all kinds of levels, twenty different enemies to blow to pieces, three boss bots, and twelve challenge mode levels, all linked by a story written the writer of Freespace 2. The game is even playable in VR, though… even I'd think twice before giving that a try.

And I might keep a bucket nearby…

DAVID HOLLINGWORTH PC

I would actually kill to know how anyone actually gets work done in these environments...

Not shown: me, twisting about in my chair like a mad person.

Rock out with your weird green fighting guitar out.

"Where are that guy's legs?" is just one question we have about this game.

NEW KIDS ON THE BLOCK

ALTER ARMY

DEVELOPER VAGUE PIXELS • **PUBLISHER** VAGUE PIXELS • **DUE** SOON
vague-pixels.itch.io/-alter-army

The first thing you need to know about Alter Army is that is has been developed by two 15-year olds. That's not the only interesting thing about the game, but it's impossible not to let this fact colour your experience with it. Mridul Bansal and Mridul Pancholi are two school kids in India who have, in their spare time, crafted a competent and enjoyable action-platformer.

"We used to talk about game development all the time", Bansal and Pancholi tell me over email. "We decided to make a game as a practice project. We would give it only one month and polish our skills as much as possible, but we got ambitious and the project expanded. Now it's been around two years since we started." The pair has taken it upon themselves to get word out about the game too, and their requests for coverage are charmingly clean of any PR filter (a lot of them open with "hey bro").

The end result of their hard work is Alter Army, an entertaining 2D action-platformer that serves as a fantastic showcase for what these kids are capable of. There are four characters to choose from in the full game, each with unique attacks and animations, but in the demo I controlled a man who smacked his enemies up with a guitar. He could charge up and unleash a giant wave of energy from the instrument, double jump to take down airborne enemies, and use a dash attack to get behind larger enemies quickly. The demo (available at https://gamejolt.com/games/alterarmy/293815) gives a good look at the game's combat, which is fluid and satisfying, with a nice variety of enemies in the opening levels. According to the game's Steam page you're fighting to save a dying universe, and you're rewarded with faster healing and harder-hitting attacks if you play aggressively. Enemies explode in pools of blood when you beat them, which might betray that the developers are young, but is nevertheless very satisfying.

What Bansal and Pancholi have achieved at a young age is extremely impressive, but working on a game for commercial release during your early teens isn't something that can be done without sacrifice. When they started out, Bansal and Pancholi were only getting three or four hours of sleep a night. "We didn't manage our time carefully", they admit. "We used to get to sleep at like three in the morning, and wake up at 6:30 for school." Their parents weren't into it at first, either. "They didn't understand much about it and as every typical parent in India they wanted us to focus on our studies not game development". Their school work has also suffered from their preoccupation: "we are more focused on the game than school, so we get bad grades sometimes".

It's not our place to speculate on if creating Alter Army was, ultimately, good for the two boys, both of whom plan on continuing to work together on other indie releases in the future. The simple fact of the matter is that the game they've made – the full version of which will run for eighteen levels and feature four boss fights – not only works, but is legitimately fun to play. At the time of writing, the game does not have a fixed release date, but the pair was aiming for April, meaning that it could be available on Steam right now. *JAMES O'CONNOR* PC

> "What Bansal and Pancholi have achieved at such a young age is extremely impressive."

Games 271

YOUR GUIDE TO PC GAMES

The elephant

Are reviews subjective? Or something else?

tl;dr? Yes - game reviews are very, very, highly, massively, HUGELY subjective things. Give five people the one game and you'll likely get five different opinions.

Give five reviewers one game, however, and for some reason a lot of people expect some weird kind of group-think to come to the fore, and everyone of them should have the same impression, and offer the same score, and keep things nice and simple.

Thing is, games aren't simple, and neither are reviewers, no more than anyone else. What are simple are review scores, and I think they're the real issue here. It's very easy for readers and publishers to - rather ironically - judge a review by the score given, not the justification for that score. It's almost like the hundreds, sometimes thousands, of words that come before are a mere preamble. But that's not the case, at all.

Games, now more than ever, are designed to elicit an emotional response, even if it's a simple one, like "Shooting zombies makes me happy." More complex games are designed around more complex emotional responses - a lot of people may not like or enjoy This War of Mine, for instance, but that does not invalidate the experience of those who do.

So, objective game reviews? Let's just say you won't find them here...

David Hollingworth

Editor

Contents

41 Far Cry 5
44 Battletech
46 Sea of Thieves
48 Warhammer: Vermintide 2
50 Telltale Batman
52 Frostpunk
54 Dead in Vinland
55 Swords of Ditto
56 Ni No Kuni 2: Revenant Kingdom
58 Empires Apart
59 Total War Sagas: Thrones of Britannia

POWERED BY REPUBLIC OF GAMERS

SCORING SYSTEM | PCPP scores its games on a 1 to 10 scale. The higher, the better – though 10 is by no means a "perfect" game. We're not convinced such a thing exists, so consider a 10 a masterpiece of PC gaming, despite its inevitable flaws. A 5 is a decidedly average game; one that doesn't excel in any particular area, without being an affront to our senses – the ultimate in mediocrity. Below this, you'll start to find the games our reviewers suffered an aneurysm getting through; above it, the titles truly worth your time and money. And remember: a score is only a vague indication of quality. Always read the full review for the definitive opinion!

WE PLAY ON:

ALIENWARE GAME VICTORIOUS

SAMSUNG 950 PRO

Far Cry 5

A song of fire and icing cultists

DEVELOPER UBISOFT MONTREAL • **PUBLISHER** UBISOFT • **PRICE** $US66.95 • **AVAILABLE AT** STEAM, RETAIL, UPLAY (UGH!)
far-cry.ubisoft.com/game/en-au/home/

Clearly, one of the biggest challenges Ubisoft Montreal has had with the Far Cry series is in creating a core story that's more compelling than the world around it. In fairness, it's not like they're alone. I put 100+ hours into Skyrim and barely touched the main quest. The same is true of Fallout 3. Hell, even my experience with The Witcher 3 is of the same ilk.

While not entirely comparable (that whole sandbox vs open-world thing), it's a problem that's seemingly inherent to any game with an open and ambitious game world whose primary pillar is player freedom. That's Elder Scrolls. That's Fallout (in recent years). That's The Witcher 3. And that's definitely the Far Cry series, too.

Fast-forward to Far Cry 5 and it's clear Ubisoft Montreal has taken this challenge to heart. The result is admirable, to say the least. It's easily the best campaign in the series, and the only thing it lacks is the next Vaas or Pagan Min on the villain front. What you get instead of those fleeting-but-iconic nemeses is a family of twisted cult leaders who believe so fanatically they are right that they actually think they're doing the right thing by forcing the fictional Hope County (set in the very real Montana) to convert to their apocalyptic way of seeing things.

It still feels like I spent the majority of my time exploring the rich side-content of Far Cry 5, rather than chasing the main quest, but Ubisoft Montreal has an interesting solution to that. There are points in the game, after you've caused a wee bit much destruction in one of the three regions, where the main narrative catches back up to you. Forcibly. You'll be dragged back into the main quest for a breath, and while there was one frustrating moment where that took me away from something very specific I was doing, the other times, I appreciated how the deliberate interruption tied into the cult's modus operandi.

Better still is the way the protagonist (now a mute and partially customisable cypher for the player) is tied into the main narrative. It's not hugely obvious, but this kind of subtlety is part of what I enjoyed most about the quiet confidence of Ubisoft Montreal's storytelling. The narrative is bookended by the threat of Joseph Seed, the main big bad, but you'll spend more of your time toiling against his three sibling underlings, each of which have a very different approach to converting the masses.

While unquestionably wicked in the execution of their united beliefs, Ubisoft Montreal stops these villains from being two-dimensional by fleshing out their motivations. You're not likely to agree with what they're doing (and if you do, please seek help), but by the time the game ends, you'll at least understand why they did what they did. And that ending is a real doozy, too.

More importantly, the gameplay is on point. While, arguably, Far Cry 5 only incrementally builds on what's come before

it, it's the way old and new systems are weaved together that presents the most appealing gameplay loop yet. Ubisoft Montreal calls it the "anecdote factory" and with good reason. While not as far-flung as the previous settings of Far Cry games, there's so much to see and do in Hope County, and the game is constantly tugging at you to entertainingly tempt you away from what you were just doing.

As a shooter fan, the shooting is much-improved, too. Forget about hitscan. That long-suffering Far Cry trope has gone the way of the dodo. The new projectile-based ballistics make mid- to long-range cultist felling particularly satisfying, thanks to the added skill gap, and the weapon sounds are so on point you should play with a decent set of cans.

The other reason you'll likely want to use headphones is because Far Cry 5 supports co-op. Unlike Far Cry 4, it's more generous with when you can use it, too, which equates to all the time outside of the opening island. Far Cry 5 is a lot of fun alone, but it's even more fun with a friend.

Unfortunately, here's a huge caveat to that recommendation. Only the hosting player gets to keep their region progression. I played co-op almost immediately and that turned into a four-hour session. As the host player, that was great, because I got to keep all of that progress. For my co-op buddy, though, well, he lost almost everything that matters.

Ubisoft Montreal splits the progression into two parts: World and Player. While the hosting player keeps both, the joining player only keeps their Player Progression, which amounts to "XP, in-game currency, inventory items, and more", according to this Ubisoft blog - *https://far-cry.ubisoft.com/game/en-us/news/152-304752-16/co-op-faq*. The problem is that World Progression isn't just sacrificing your completed missions as a guest player—which, in and of itself is deflating already—it's also your resistance level. The higher your resistance level, the greater the arsenal you have access to in the gun stores.

> "Forget hitscan. That long suffering trope has gone the way of the dodo."

WHY SHOULD I CARE?

+ You have issues with religion

+ Every gun looks better with an American flag

+ You would have liked to have seen Montana

This is a more frustrating issue for players hoping to cooperatively play the majority or all of the game (that was my intention), as it detracts from player freedom, rather than adding to it. Considering Ubisoft Montreal is quite stingy with in-game monetary rewards, especially in relation to the comparatively high cost of weapons (not to mention attachments and cosmetic upgrades), it adds an extra level of undeniable grind for the guest co-op player.

Couple this with the fact that you can't get too far away from your co-op partner or the game freaks out—which means you can't have, say, one player in a plane flying large strafing circles and the other on the ground—and while Far Cry 5 is absolutely best played cooperatively, the provisos are such that it taints its recommendation.

The added grind for a guest player's weapon unlocks also serves to highlight the questionable inclusion of microtransactions linked to the stores. Yes, you can unlock everything through in-game currency, but considering how limited that is—and also considering you have to pay a whole wad of cash to replenish your ammo (which, illogically, can't be done by ammunition type)—there's definitely a waft of underhandedness in terms of attempting to entice players to part with real money to stop the grind in a game that's already full priced.

What complicates things a bit

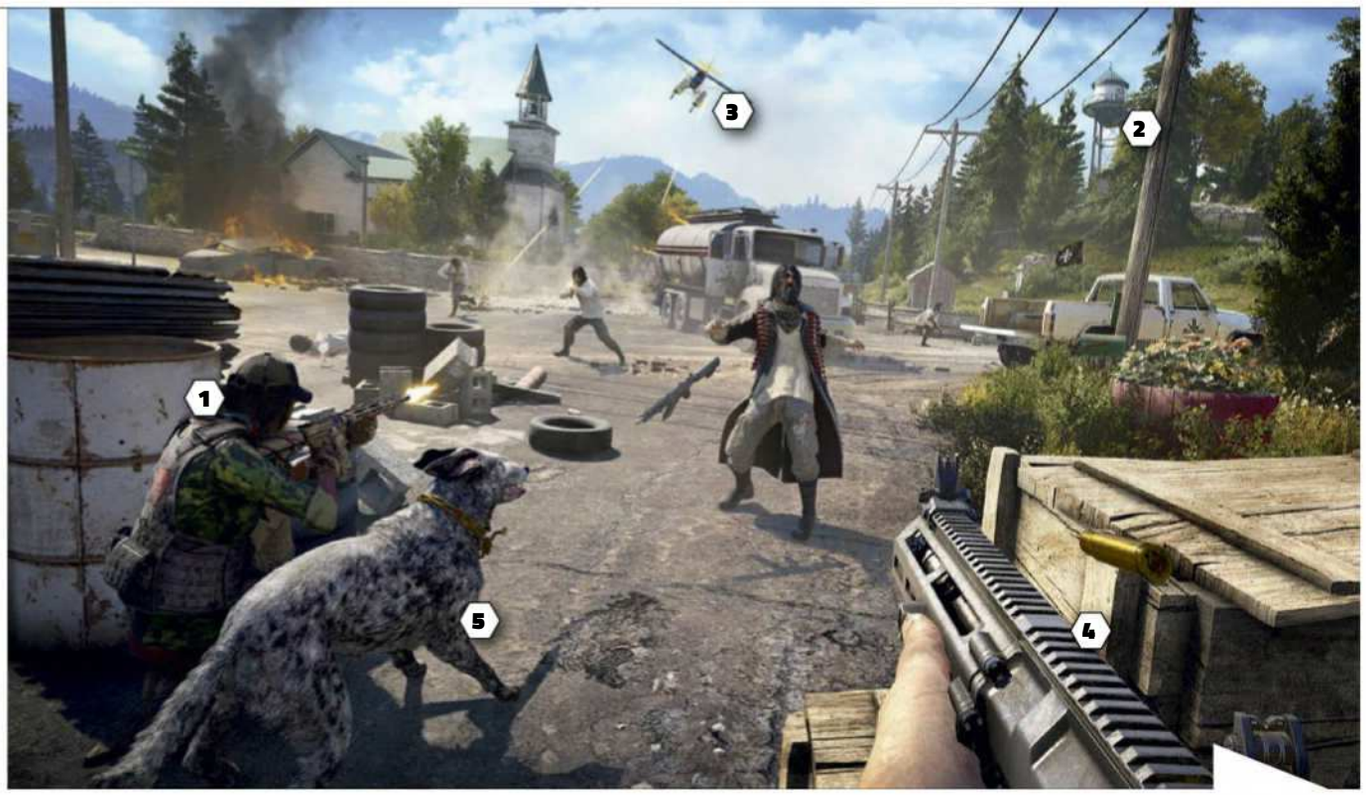
SEQUENCE

NIGHT FLYING...

1. Spawn chopper for night-time raid

2. Sniff out nearby cultist outpost

3. Explosively liberate from on high!



more is that Ubisoft is calling these microtransactions cosmetic. That's a half-truth because, while technically cosmetic, players can use silver bars (that's the currency you can buy or find scarcely in the game world) to purchase prestige weapons. These are variants of weapons you can unlock later, but you can also pay cash to buy the silver bars early in the game to unlock the specific prestige weapon. It's not like the system can be branded pay-to-win, because you're fighting against AI, but it's not 100% cosmetic. Considering the first page to load at any gun store is the promoted items (which can all be purchased with silver bars, or a stack of hard-to-get in-game currency), it's a constant reminder of the presence of microtransactions. On one hand, how biblically serpent-like of you, Ubisoft. On the other, Ubisoft Montreal is transparent with the in-game price and stats of weapons, so I was selective with what I spent my hard-earned Far Cry 5 dollars on.

The microtransactions and the big-disclaimer co-op do leave a bad taste in the mouth. Ultimately, though, there's more praise to be heaped upon Far Cry 5 than condemnation. Now, if Ubisoft Montreal can patch in World Progression to co-op and be more generous with in-game currency (safes that consistently only have $250; really?), what's already the best Far Cry game can also ascend to the lofty heights of being one of the best sandbox shooters of all time.

NATHAN LAWRENCE PC

SPOTLIGHT

ALL IN A DAY'S FIGHT

1. Clever use of allies can make or break some combats

2. Charge in, or use the environment. Towers like this are great for sniping

3. Or you can go co-op and get a friend to strafe everything in sight

4. Far Cry 5 has vastly improved ballistics

5. They are in fact all good dogs, Brent

OR TRY THIS:

FAR CRY 2
UBISOFT MONTREAL, 2008
- BEST FIRE EVER
- Malaria.

THE HUNTER: CALL OF THE WILD
EXPANSIVE WORLDS, 2017
- Nothin' but huntin'!
- Uh, damn this looks actually really good!

DYING LIGHT
TECHLAND, 2015
- ZOMBIES!
- You may be tired of zombies

VERDICT:

A ripping story, wide ranging side activities, and the best shooting in the series. Get it in you.

8

Battletech

Stomp your way to victory – if the bugs don't stomp you first.

DEVELOPER HAREBRAINED SCHEMES • **PUBLISHER** PARADOX INTERACTIVE • **PRICE** $US39.99 • **AVAILABLE AT** STEAM, GOG
battletechgame.com

I do not want to be writing this review. I would much rather be playing Battletech, Harebrained Scheme's tactical break into the more than 30-year old universe of the same name, a game about giant walking mecha striding about the battlefield causing glorious mayhem in a universe that is as rich as it is far-fetched.

And I would be playing it now, and far happier to be writing this review, but to date I have tested Battletech on three different PCs, and the damn thing just won't run – and not in any comprehensively familiar pattern, either. My home PC crashes before launching the tutorial. My work PC managed the game for a few days, before it too mysteriously started refusing to launch, and a borrowed gaming laptop simply crashes out before the game even launches. And sadly, I am not alone. And with each crash a window pops up asking you to post your bug reports on the official bug-reporting forum…

There are currently 44 pages of bug reports, often with more bug reports nested in each top-level report. It is remarkably disheartening, because what I have seen of the game makes me think it should rate – and among those who can play it, it certainly will – as one of the *best* games of the year.

For a game that's about robots the size of buildings smashing other robots to pieces – an idea that makes no damn sense when you think about real military vehicles, but is cool as heck – the game delivers a strong and emotional start to its campaign. In fact, it reminded me a lot of the start of Dragon Age: Origins. Three simple choices do a lot of heavy lifting – they mark out where you come from, why you're a Mechwarrior, and what kind of fighting you've taken part in, while also speccing out your starting skills.

> But the fact remains: the game is simply too buggy to review, as it stands, at this time.

WHY SHOULD I CARE?

+ You love a rich story with your strategy games
+ You feel lucky
+ You want a game that lets you choose they/them pronouns

These decisions are written into the main story structure, too, and as you zoom about the galaxy picking up contracts and trying to keep your mercenary company afloat, they'll often come back to haunt you.

But as rich as the game's story (and don't get me started on the lovely art and cutscenes) is, the game's got a lot going for it. Initiative cleverly ties into how light or heavy each mech is, and the game makes it very easy to keep your lance of up to four mechs under control. Combat can be as brutal or precise as you want, especially once you start equipping mechs to match your play style.

Whether you like standing back and sniping with PPCs or rushing into action with assault mechs, or any other tactic – and the game's certainly deep enough to warrant a lot of experimentation - combat is deeply satisfying.

But the fact remains: the game is simply too buggy to review, as it stands, at this time. It's definitely worth waiting for a patch, but for now, I have more stable games that could use the hard drive space.

And that really hurts to say. *DAVID HOLLINGWORTH* PC

OR TRY THIS:

HAWKEN
ADHESIVE GAMES, 2012
- Shit, it's still around!
- It's also not as good

MECHWARRIOR ONLINE
PIRANHA, 2013
- Lots of mech variety
- One mech at a time

INTO THE BREACH
SUBSET GAMES, 2018
- Cheaper and lighter
- Dammit, I just want Battletech!

VERDICT:

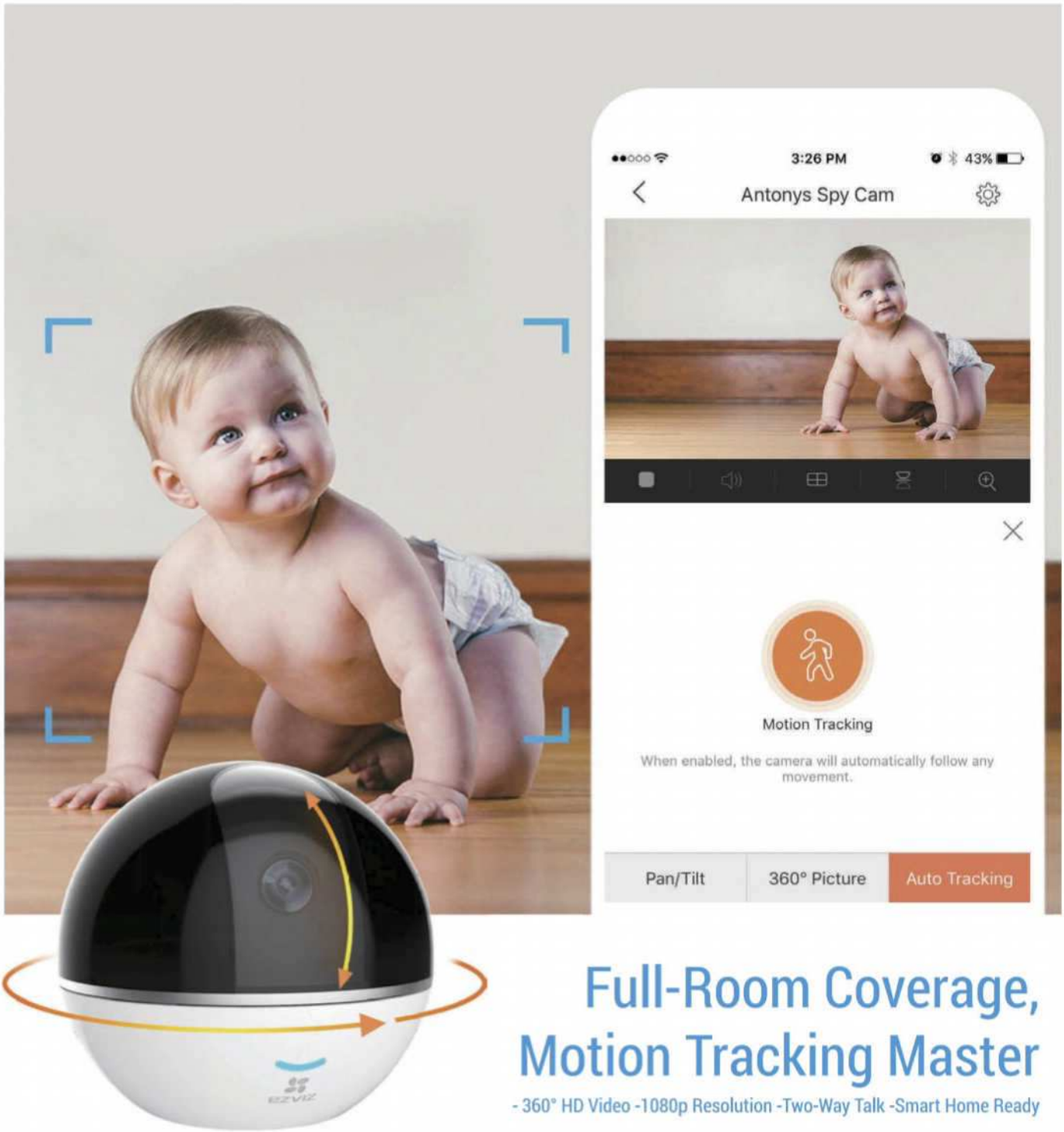
There is a great game under all the bugs, but for now my experience of the game makes it hard to recommend.

6

ezviz™
a HIKVISION company

1 YEAR WARRANTY
1 YEAR WARRANTY
1 YEAR WARRANTY

ez360 Pro 1080P 2 Megapixel Multifunctional PT Camera



Full-Room Coverage, Motion Tracking Master

- 360° HD Video -1080p Resolution -Two-Way Talk -Smart Home Ready

The ez360 Pro keeps a lookout for you. If it notices something moving, the camera will track the movement automatically so you can get a better look at it

Distributor: **Prime Australia**
www.primeautech.com.au
email: sales@primeautech.com.au
Phone: 0497009808

WHERE TO BUY:

Austin Computers · IT Station · .com.au · Capitol Computer · PC D.I.Y. · Umart online · VIRCO · wireless 1

Sea of Thieves

As deep as a real locker, rather than Davy Jones'.

DEVELOPER RARE • **PUBLISHER** MICROSOFT STUDIOS • **PRICE** $99.95 • **AVAILABLE AT** MICROSOFT STORE
www.seaofthieves.com

Captain's Log: Day 1 – Success! Used the mythical vee-pee-en relic to magically transport between time zones. From Nova Hollandia to Nova Zeelandia. The reward: a two-hour head start on the high seas. It's as quiet as the grave. Odd sighting of passive pirates. Beautiful sights to behold. Easy favour-earning with Gold Hoarders and Order of Souls. Avoiding the favour of the fauna-loving Merchant Alliance (for now?).

Captain's Log: Day 2 – Some time on the ocean, but not ideal. Rare, the god of these waters, has plagued all pirates with a pox of beard-related curses. Lavenderbeard. Bronzebeard. Kiwibeard? Possibly a lingering curse from the vee-pee-en relic. But I suspect it's a punishment from Rare. The water god currently isn't responding to prayers. Hopefully tomorrow.

Captain's Log: Day 3 – Middling success today. Cursed beard woes persist. Usual crew suffering from the same afflictions. Workaround seems to be solo sailing. Sloop, there it is. Between gentlemanly pirates, it's the better ship. Smaller. Faster against the wind. Tighter sailing circle. Easier to solo sail. Easy-peasier with a piratey partner in high-seas crimes. Wish I could crew her with a full complement. The Rare god won't allow it.

Captain's Log: Day 4 – The galleon is back in action. Yarr! Baffled at why my flighty crew can't meet me aboard without having to gather beforehand and set sail on a new tub. Bizarre limitation when we only have a sloop and galleon in port to choose from. But this is the high-seas life at its best. These waters were designed to be shared with mateys. It's the simple pleasures. Scraping between rocks. Sails caught in a stiff wind after tight seamanship. Loading crewmates into a cannon and firing them at a sloop to rob them blind. Other sailors we encounter seem more interested in being merchants than pirates. Strange.

> "Not sure if this pirate life is sustainable, despite the simple pleasures..."

WHY SHOULD I CARE?

+ Yarrrr?
+ Matey!
+ Shiver me... you get the damn idea

Captain's Log: Day 5 – Some new crewmates today. Shipshape seamanship destroyed. Lots of wasted planks on plugging up holes from easily avoidable obstacles… like islands. Grr. Still, we're plundering islands and felling hellish skeleton foes. Easy fights against the regular skeles, but tougher variants deserve respect. Still not interested in courting the Merchant Alliance. The rewards aren't worth it. Loathe them for their reliance on mundane fetching. Then it dawned on me. I'm in a familiar loop. Collect task. Fetch object (chest or skull). Return for golden rewards. Repeat. Not sure this life is sustainable, despite the simple pleasures.

Captain's Log: Day 6 – Found a new challenge. The dreaded Skeleton Forts. Waves of undead. Swarming foes. And other budding marauders attracted to

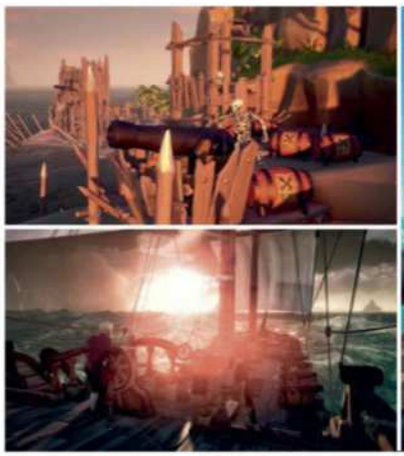
SEQUENCE

MASTERING YOUR COMMAND

1. Lay in a course alongside your enemy

2. Unleash a well-timed broadside

3. Enjoy the sound of a splintering hull!



the supernatural skull in the heavens. Tough, tough battles against the dead and the living. It never seems to end when other pirates are battling against you. Without the living threat, it's a challenge. And the rewards are glorious. Even started appeasing the damned Merchant Alliance with the Skele Lord's bounty. Is this as good as it gets?

Captain's Log: Day 7 – Yes. Yesterday was as good as it gets. I'm in limbo. The same damn tasks. Over. And over. And over again. When will the Rare god offer us something newer and shinier? Other crews aren't even interested in fighting anymore. It's all about the endless pursuit of pieces of eight. But all I can buy is new shiny stuff for the exterior and nothing that adds to the heart and soul of my high-seas life. Though deep, these seas feel shallow. I feel more like a landlubbing weekend sailor rather than a dreaded pirate with the ocean pumping through his veins.

Captain's Log: Day 10 – My crew has mutinied and moved on to other pursuits. The desire to sail alone is nigh non-existent. Maybe I can coax others into the waters. But I cannot, in good conscience. Not now. These waters aren't flat and dead of wind. They're just middling. There's fun to be had. At times, rapture, when the stars align. But mostly these waters reek of wasted potential. Still waiting on the Rare god to answer my prayers of additional things to do. Not scuttling the ship just yet.

I'll set sail again once these prayers be answered… *NATHAN LAWRENCE* PC

SPOTLIGHT

A PIRATE'S LIFE

1. That is one blundered buss

2. Ramming is reliable, but... tricky

3. FIRE AS SHE BEARS!

4. You'll want a skilled hand at the helm in close quarters

5. Not shown - weird beard

OR TRY THIS:

SID MEIER'S PIRATES
FIRAXIS GAMES 2005
- Much more content
- Much more dated

PILLARS OF ETERNITY II: DEADFIRE
OBSIDIAN ENTERTAINMENT 2018
- Much more content
- Much less players

GUNS OF ICARUS
MUSE GAMES 2012
- AIR PIRATES
- I hope you like heights...

VERDICT:

The core gameplay loop is great, but it's too easy to plumb the shallow depths in a few hours. Sea of Thieves needs more meaningful content.

6

Warhammer - Vermintide 2

The Skaven return, and they've brought friends... and bugs.

DEVELOPER FAT SHARK • **PUBLISHER** FAT SHARK • **PRICE** $US29.99 • **AVAILABLE AT** STEAM
www.vermintide.com

Fatshark pretty much came out of nowhere a couple of years ago with what is arguably one of the greatest PC games ever developed. It also had one of the silliest names when it came to overblown pomposity.

Warhammer: The End Times: Vermintide.

It was a tie-in to the End Times event that saw the Warhammer tabletop game morph fatally into Age of Sigmar, and a damn fine take on gameplay pioneered by Left 4 Dead. Four adventurers, hordes of the Skaven rat-men, and lush, challenging levels to negotiate from point A to point Z.

Vermintide II - the Warhammer moniker is still there, but the End Times have now pretty much come and gone (look, the Warhammer timeline was always pretty damn fluid, but over the last ten years it's gotten downright sloppy), but the adventurers remains, and now there's a whole new blasted city to fight over, in, and through.

In a lot of ways, the heart of the game hasn't changed at all. Before every session you start in your hidden keep, where you can indulge in a bit of light crafting, play around with weapons and gear, and queue up for a fight. You can seek a Quickmatch, or get more detailed with game modes and difficulty, and as other players join your session, you pass through the mystical Bridge of Shadows to wherever the next fight is. This could be in a forest of towering trees and choked ravines, the undersewers of Helmgart, or in its fields and streets. The variation in setting and terrain keeps the game fresh, and with only four slots for five different adventurer classes, the game's quite adept at offering a lot of replay value.

Each match offers waves of villains, singular bosses, and every combination in between. Watching a horde of Skaven pour out of a sewer or over rooftops, or a mob of chaos foot soldiers storming up a hill, provides a singular thrill, and a constant sense of barely hanging on. Every one of the five characters has both ranged and melee modes, and watching your supply of arrows - yes, I always play the elf, what of it? - run out faster than the bodies you're trying to shoot down is pretty epic. Then you just draw your sword - or spear, or daggers, or... - and wade on in.

Each character now also has a special ultimate style ability, but there pleasantly underpowered compared to games like Overwatch. They're still useful, but they're not game-winners.

There are also more ways to customise your character than before. There's more equipment to fuss over, and each character now has three archetypes they can further specialise in, each with their own special ability and cosmetic look. And on top of that, there are talents to invest in and unlock as you level up.

All in all it's a richer, deeper experience.

But, then again, that pretty much describes the bugs, too.

Fat Shark is a small development outfit, and while they're very good at what they do, Vermintide 2 feels a much less polished product than its predecessor. Connection issues are always going to be present in a game that's built around a host/client model, but in this game it seems particularly fault-prone. If the host drops, it's

One never tosses dwarf - they can toss themselves just fine.

> "Just hammering at these monsters for minutes on end is kinda boring..."

WHY SHOULD I CARE?

+ You must crush Chaos at all costs

+ Rats are for smashing, not cuddling

+ You've a real thing for gothic architecture

SEQUENCE

A WALK IN THE BLACK FOREST...

1. What a lovely day!

2. Celebrate by smashing a Chaos Warrior!

3. And then shooting his mate! Joy!

impossible to switch to a new one, and so disconnects are pretty fatal. And I've been getting a lot of disconnects.

On top of that, the various bosses in the game - giant skaven, chaos spawn, trolls, and all manner of large beasties bestowed with a huge supply of hitpoints - are ludicrously hard to take down. It's doable, but the effort seems massively out of proportion - it's like they exist only to make sure you run through every potion and explosive you have, so the next normal fight is that much harder. Just hammering away at these monsters for minutes on end is kinda boring, and if you have even just one bot in your team, it's nigh impossible – end up with all bots (which is all too regular) and you may as well quit right now and just play something else.

On top of that, the complex terrain these fights can happen in further adds to the frustration, as you get stuck on a slim vertex of architecture and pound to death by a character animation that's phasing in and out of the game.

Two cases in point really mark just how poor this part of the game can be: an ambush in a farmyard where I spent more time stuck in a corner getting whaled on by a giant thing while a slew of players logged on, saw the dire situation, and just logged out again; and one where the giant monster thing attacked my party in a sewer, so the entire fight was just constantly getting knocked from one level to another, and then struggling to the one ladder leading between upper walkway and shit-filled cesspit. It's just… not fun.

The game still offers just as many moments of sheer, over-awed and joyful panic, but the 'just one more game' draw of the original is tempered by the fact that the next game could harsh your entire buzz.

I've no doubt that Fat Shark will overcome these issues, but for now... I think I've made my last effort to save Helmgart. *DAVID HOLLINGWORTH* PC

SPOTLIGHT

PARTY POLITICS

1. Your bright Wizard is great at dealing with many enemies at once. Also, a jerk

2. Victor is quite the heavy hitter. Also. a jerk

3. The Inquisitor has run off by himself again. You cannot hear him being a jerk

4. It's ya dwarf! Slightly less of a jerk.

5. Just two of these jerks? They're almost not worth the effort. In a horde, though...

OR TRY THIS:

WARHAMMER: END TIMES: VERMINTIDE
FAT SHARK GAMES 2015
- A more solid and complete experience
- Just the rats, ma'am

LOTR: WAR IN THE NORTH
SNOWBLIND STUDIOS 2011
- Just as many elves
- Not very good

VIKINGS: WOLVES OF MIDGARD
GAMES FARM 2017
- Even more beards
- No rats

VERDICT:

A great game held back by poor balance decisions and a layer of petty bugs.

7

Batman: The Enemy Within

The Clicking Joke

DEVELOPER TELLTALE GAMES • **PUBLISHER** TELLTALE GAMES • **PRICE** $28.99 (GOG) • **AVAILABLE AT** STEAM, GOG, RETAIL
telltale.com/series/batman-season-2

For all its faults, the first season of Telltale Games' take on Batman established that the writers weren't afraid to mess around with canon. Major characters died without much fanfare, others had their roles changed substantially (Penguin and Two-Face were reinvented while still being recognisable), and – in the game's most obvious season 2 table setting – the Joker wasn't really the Joker yet. Instead we had John Doe, an Arkham Asylum inmate with that distinctive green hair, pale face, and terrifying grin. The Enemy Within is as much about John's journey as it is about Batman and Bruce Wayne, and Telltale's willingness to bend these characters into new shapes, to hurt and kill their darlings, pays dividends.

If you've played a Telltale game since the first season of The Walking Dead, you know what their current deal is. This is an adventure game with very few real puzzles, one in which most of the gameplay boils down to making decisions and choosing conversation responses, broken up by the occasional unchallenging quick-time event. The 'so-and-so will remember that' notifications are abundant, and Alfred can barely ask what you want for breakfast without reminding you that the choices you make now will have serious ramifications in the future.

It's a format that, in some of Telltale's later seasons, has started to feel a bit old, with low stakes and pathways that always tend to converge back to the same points harming their storytelling. But The Enemy Within's framing of Batman and Bruce as separate figures, and the focus on the relationships that both of them form with the other characters, allows for a deeper characterisation than we've had in any of these games since the first Walking Dead. The plot – which involves uncovering shadowy secret organisations and retrieving viruses that are in the wrong hands – is mostly just an excuse to get a heap of Batman characters all in one place, so that Bats and Bruce can bounce off Amanda Waller, Harley Quinn, Bane, and other recognisable favourites.

Is that the guy from Death Note?

> "... it's possible to through the entire fourth chapter without ever donning Batman's cowl."

WHY SHOULD I CARE?

+ You played the first game and want to see what happens next, obviously

+ You still believe there can be new wrinkles in the Batman/Joker dynamic

+ You love a good moral conflict

Your relationships with these characters shift and change, and at the end of each of the five episodes you're given a rundown of how your standings with them have changed. Telltale has taken some smart liberties to keep things interesting here. For instance, you get to know Harley Quinn – who has turned to villainy without a Joker to lure her in – mainly as an undercover Bruce Wayne, and depending on decisions you make it's possible to go through the entire fourth chapter (and most of the last one) without ever donning Batman's cowl. Despite occasional bouts of silliness – and the standard allergy every Batman villain has towards lining up a clear shot and shooting him dead – this is a cracker of a Batman tale.

The highlight of the game is its take on the Joker. Turning the Joker into John Doe, a blank-slate maniac who seems like he could be 'fixed' by just the right Batman, is a genius twist on the character mythology, taking the abusive relationship that the two share and finding a new angle to explore its toxicity from. It's not unusual to compare Batman and the Joker's dynamic to a love story, but it's rare for a writer to take their love as seriously

SEQUENCE

INSANE IN THE WAYNE

1. A completely ordinary pair walk into a massage parlour. Time to release some tension.

2. The man at the desk seems suspicious, but Bruce can use his influence and privilege to -

3. ...well, this could have gone better.

as The Enemy Within does. This is a Joker who talks about love and friendship a lot, and it's up to you how Batman and Bruce Wayne take that, and what they feel back towards him. It's doing something similar with these well-known figures to what Hannibal did on TV a few years ago, and offers a good take on the now requisite 'Batman creates as many problems as he solves' discourse.

The big 'selling point' of The Enemy Within is the final chapter's split – depending on how you've played you'll get one of two very different versions of Joker, and the chapter will play out differently depending on which one you've brought about. Having played both iterations of this final episode, they're honestly very different, in terms of both content and tone. Other episodes also feature entire scenes that you might miss depending on your decisions.

This all speaks to how good a job The Enemy Within does of making your decisions feel like they matter, something Telltale has struggled with in the past. Without spoiling anything, I can say that my Bruce Wayne ended up in a very specific place by the end, having made decisions that guided him down a path that felt personal to my playthrough. When the final choice of the season is offered up, I didn't make the healthy one, or the one that might offer some redemption – I made the one that made the most narrative sense. I didn't go in looking for a dark ending, but I leaned into it as the right narrative decision. When they're on form, Telltale's writers are experts at making you feel like you've crafted a smart narrative rather than simply made the choices that will most benefit you.

While the first season of Telltale's Batman was a little shaky in its establishment of a new status quo, The Enemy Within feels far more firm in its intent. It tells a damn fine Batman story, involving a solid chunk of the classic rogues' gallery, and empowers the player to craft their Batman (and their Bruce) as they see fit. The Arkham games are wonderful power fantasies, but Telltale's take on the Dark Knight is a great reminder that the character's real appeal lies not just in his strengths, but also in his many vulnerabilities. *JAMES O'CONNOR* PC

SPOTLIGHT

BATS IN THE BELFREY

1. This game does not shy away from blood – in fact, it gets gruesome.

2. Some situations require the brute force of the Batsuit.

3. You can either sweep in close to take this guy out...

4. ...or get him with a gadget from afar. Honestly, it makes no real difference.

5. The cinematic angles and framing do a good job of establishing distance and space.

OR TRY THIS:

THE WALKING DEAD COMPLETE COLLECTION
TELLTALE, 2012-2017
- Season 1 is still their best
- The other seasons are patchier

BATMAN: ARKHAM CITY
ROCKSTEADY STUDIOS, 2012
- The best Batman game, don't @ me
- Overstuffed world

DEUS EX
ION STORM, 2000
- Also all about narrative choice
- Not really anything like Batman

VERDICT:

One of Telltale's best seasons, and a Batman tale that finds something new to do with the Joker.

8

Frostpunk

City building with an ice-cold heart.

DEVELOPER 11 BIT STUDIOS • **PUBLISHER** 11 BIT STUDIOS • **PRICE** $US29.99 • **AVAILABLE AT** STEAM
www.frostpunkgame.com

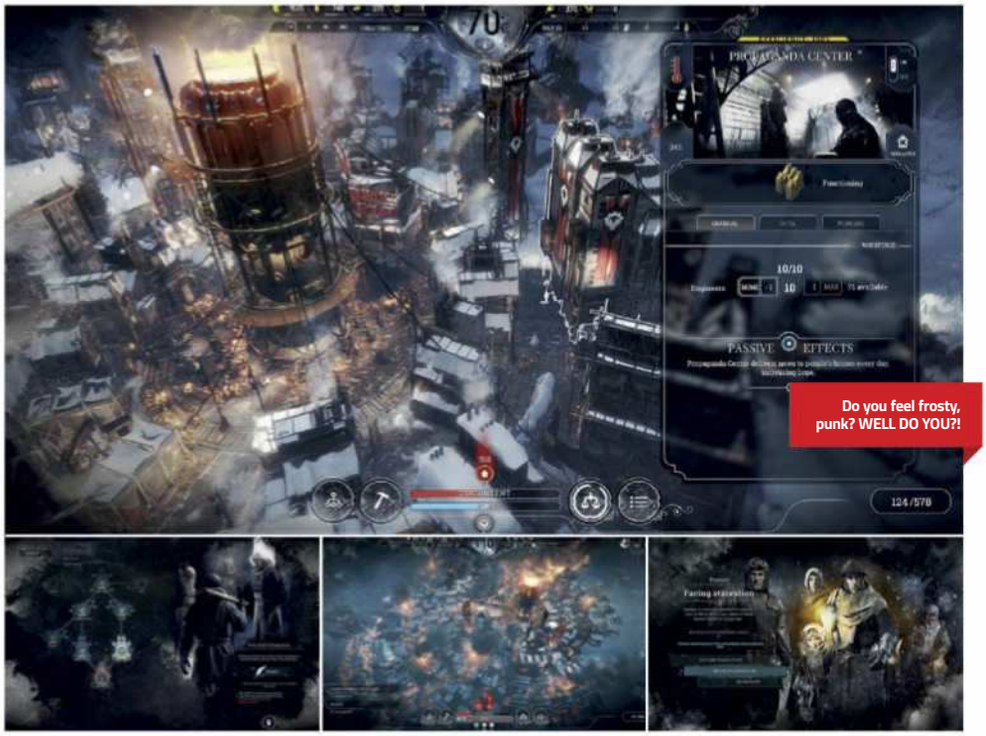
11 bit Studios, the same dev behind This War of Mine, is at it again with Frostpunk. Kinda. While both simulators, This War of Mine has a micro focus on its cast of characters and Frostpunk takes more of a macro approach. The setup is simple enough: the world has frozen over in an alternative history and it's up to you to keep your people alive.

Things start out chilled enough, but you'll soon be met by threats that range from predictable to unexpected. There are times when past decisions came back to bite me in the arse, but by midgame, I was confidently able to roll with the punches. Admittedly, this was after a few false starts. Part of the early tension is about managing the unknown, so while it's worth restarting once you wrap your head around the early build order, it's ill-advised once you get deeper into proceedings.

There are some relatively straightforward things to learn but, ultimately, you'll be aiming to keep discontent low and hope high. During early game, engagement is high because the path to best managing these things isn't immediately clear.

As you start unlocking technologies and signing new laws, the path becomes a whole lot clearer. While still paranoid and regularly saving during midgame, I started to pave a path towards a self-reliant simulation. By the time I crept closer to endgame, Frostpunk became easier rather than harder.

When endgame arrived, though, there's an event that creates a fantastic sense of momentum until Frostpunk's somewhat abrupt ending. That fantastic tension returned, and I was forced to deal with the reality that I might not be able to achieve every essential item on the new to-do list before that ending swept in. I was fully engaged again.



Do you feel frosty, punk? WELL DO YOU?!

> By the time I crept closer to endgame, Frostpunk became easier rather than harder.

WHY SHOULD I CARE?

+ You live for cold weather
+ You hate a depressed populace
+ You felt This War of Mine wasn't big enough

In late midgame, when I was cruising on autopilot, I also discovered that the game throws arbitrary debuffs at you. For instance, it doesn't make sense that discontent is rising because of apparently sick people, when I have empty beds in my health facilities. I first noticed I wasn't connecting with the human element of the game when I would freely march wasteland inhabitants back to my city without a guide, knowing full well that some would die.

That way, I reasoned, at least I wouldn't have to build more beds.

While I can acknowledge that these kinds of decisions are part of the game anyway, the lack of emotional connection to them, and the absence of discontent/hope consequences for these kinds of decisions lessened the oomph of these regularly occurring moments. There are some clear missed opportunities with Frostpunk, especially in the lack of meaningful replayability.

Despite my lack of a connection with the population – which is clearly supposed to be a big part of the game – I was still warmed by Frostpunk's simulation element, even if there's only a handful of hours in the main campaign (and very little reason to replay). *NATHAN LAWRENCE* PC

OR TRY THIS:

THIS WAR OF MINE
11 BIT STUDIOS, 2016
- More intimate
- More depressing

SURVIVING MARS
HAEMIMONT GAMES, 2018
- Base-building-focused
- Meteors suck

JUDGEMENT
SUNCRASH, 2016
- Fun horror survival
- Slight Hellmouth

VERDICT:

Though repetitive with stacks of downtime, Frostpunk has a strangely addictive gameplay loop (more so, I imagine, if you emotionally connect with your people).

7

COOLER MASTER

Make It Yours.

GAME SMARTER, NOT HARDER

MASTERKEYS **MK750**

With On-the-Fly Controls, Cherry MX Switches and Removable Wrist Rest

The MK750 mechanical gaming keyboard is the sleeper hit for elite gamers. The minimalistic, floating key design gives way to durable Cherry MX switches, intuitive On-the-fly controls, dedicated multimedia keys, and hybrid key rollover to ensure peak performance through the toughest battles. If that weren't enough, a removable magnetic wrist rest gives comfort during long sessions, while an RGB lightbar surrounding the bottom and sides gives subtle illumination to your setup.

RGB 16.7 Million Colors

MX

MAKE YOUR GAMING EXPERIENCE

Dead in Vinland

"You're Thor? My back is killing me!"

DEVELOPER CCCP • **PUBLISHER** PLAYDIUS • **PRICE** $US19.99 • **AVAILABLE AT** STEAM
http://deadinvinland.com/

Afraid; a hall-burning; a family forced to flee across the ocean, through a raging storm, to a mysterious island… Dead in Vinland starts out like many of the historical stories and myth cycles that have inspired it. It's your hall that's been burned, and your family, and it's you that is responsible – though the actions that have caused such a turn of events are left vague.

Regardless, the background of Dead in Vinland soon pales to the reality – keeping your family fed, happy, and safe. Which is a much bigger challenge than you might expect…

Back when I was playing a lot of DayZ, my girlfriend called it a 'Russian depression simulator', and it's a title you could easily apply to Dead in Vinland, since stopping your four main family members from topping themselves when they get too depressed is one of the game's main aims. In fact, it says a lot that all of each character's five main stats are negative descriptors – no one ever gets happy, they just get less depressed. Same too with hunger, sickness, fatigue, and injury.

Much like the popular roguelike This War of Mine, Dead in Vinland is all about balancing necessity against survival. Aside from the five main stats, each character has a set of skills that suit them to a certain task. To keep everyone hale and happy (for values of 'happy') you need to gather water, food, wood, and a number of other items that you'll need to consume to survive each day. You'll build workstations and shelters, scavenge for goods, and head off into the unknown to explore the island and hopefully find more resources.

And you'll have to fight. Here it's a pure, though less entertaining, iteration of Darkest Dungeons, whereby you move along a set of ranges and deliver various special attacks from a pool of action points, while NPCs like 'knife guy' try to stick you with sharp weapons.

The combat may be a little mundane, but the art is striking.

> "The main stats are all negative - no one ever gets happy, they just get less depressed."

WHY SHOULD I CARE?

+ You love the show Vikings, but want it to be darker

+ You need a new This War of Mine to get depressed by

+ You think every story should start with a good hall burning

The basic mechanics of Dead in Vinland are sound, if a little on the grim side, but the game suffers from some very patchy writing that can never decide if it wants to be like something out of the Sagas, or a more witty take on Norse history. Thankfully, the sheer amount of choice in the game keeps you going, and each playthrough – there are other characters to discover and recruit into your motley band, but lose one of the originals and it's game over – feels fresh and unique, as new stories emerge from new decisions and randomly generated elements. Similarly, you're always balancing pushing characters to be as productive as possible with the fact that nearly everything they do will depress them, so regularly resting or healing characters is a necessity.

If micromanaging a Viking family through crisis after crisis sounds like your thing, and you're totally okay with regularly losing your family to actual suicide, Dead in Vinland is the game you want to be marooned with.

DAVID HOLLINGWORTH PC

OR TRY THIS:

DARKEST DUNGEON
RED HOOK STUDIOS, 2016
- Better combat
- Less spectacle helms

THIS WAR OF MINE
11 BIT STUDIOS
- Exceptionally well made
- Will depress the heck out of you

DEAD AGE
SILENT DREAMS, 2016
- With added zombies!
- Not a lot of variety

VERDICT:

Not the greatest writing, but the game's many overlapping mechanics make for some great emergent storytelling.

7

Swords of Ditto

Constant death never looked cuter.

DEVELOPER ONEBITBEYOND • **PUBLISHER** DEVOLVER DIGITAL • **PRICE** $US15.99 • **AVAILABLE AT** STEAM
theswordsofditto.com

I have died a lot playing Swords of Ditto. I've been poisoned by the puke of shambling zombies, and died trying to run away; I've been blasted by sonic bat things; beaten up by skeletons; and more ways besides. I have constantly let down the land of Ditto, who are relying upon me – the valiant Sword of Ditto – to rid them of the rule of evil sorceress Mormo.

And this whole process is just so darn CUTE!

Thankfully, death is a mere hiccup. Sure, you die, but the legend of the Sword of Ditto goes on, and every one hundred years another hero rises, grabs the sword of the last ditto, and magically receives their power. So, it's not much a death, as a reset of the game itself… With each new life, the world itself changes, getting darker, buildings moving about, forests growing or disappearing, so that each playthrough presents a new challenge for each new hero.

The twist lies in that fact you only have four days before the inevitable confrontation with the evil Mormo, so you need to spend your time wisely. Sure, you could go straight to her evil lair, full of evil minions, but it's wiser to level a bit first, and maybe even attack and destroy the Anchors that hold her to this realm. And, frankly, so far, I've not even made it that far.

The core gameplay loop though is wonderfully short and sweet (emphasis on that last). You move from screen to screen in a Zelda-like progression, clearing out monsters and taking on scattered quests, occasionally returning to the hub-like central town to buy more gear or improve some upgradable items. Then you head off to Toy Dungeons (which sounds kinda kinky now I think about it) to search for powerful toys to defeat Mormo.

The big blue guy may look cuddly, but he is anything but...

> You can just sit down, get into the game in small increments, and play until you die.

WHY SHOULD I CARE?

+ You're tired of grim-dark fantasy

+ Chocolate is the best healing item

+ You want to be told what to do by a magic talking dung beetle. *Really.*

Did we mention that Ditto seems to have a toy-based economy? And that fast travel is based around kazoos? Or that your healing items are chocolate bars and cookies? Yeah, it's *that* cute. Combat is relatively simple – each swing attacks any nearby monster, and there are no special attacks to worry about, just pure button clicking. Well, none of your own, anyway – monsters though can poison your or otherwise perform some nasty tricks, like making you more or less unable to deal damage for a certain amount of time.

It is hardly a deep experience, but what it lacks on that front, it more than makes up for in charm and accessibility. It's very easy to play for short chunks of time, and the simple, cartoon-like graphics make load times non-existent. You can just sit down, get into the game in small increments, and play until you die. Then take a break, and come back to it again when you're ready. And if you've kids you want to get into dungeon-bashing, this game is perfectly wholesome enough for them to cut their teeth on.

And if you can resist bopping along to the hyper-cute retro soundtrack, well… then you're a better Sword of Ditto than I. *DAVID HOLLINGWORTH* PC

OR TRY THIS:

ORI AND THE BLIND FOREST
MOON STUDIOS, 2016
- Just as cute
- Slightly darker story

STREETS OF ROGUE
MATT DABROWSKI, 2017
- Emergent gameplay
- Early access

FAR CRY 5
UBISOFT MONTREAL, 2018
- The hell?!?
- Go home Steam recommendations, you're drunk.

VERDICT:
Cute and relatable, and very enjoyable in small, perfectly formed chunks. Much like each new Sword of Ditto!

8

Ni no Kuni II: Revenant Kingdom

Use your Higgledies to save Ding Dong Dell!

DEVELOPER LEVEL-5 • **PUBLISHER** BANDAI NAMCO • **PRICE** $US59.99 • **AVAILABLE AT** STEAM, RETAIL
en.bandainamcoent.eu/ni-no-kuni/ni-no-kuni-ii-revenant-kingdom

Ni no Kuni, like all good JRPGs, is a sequel for most of us but the third game in the series for the Japanese. Except not really because while it first appeared on the Nintendo DS, the game was massively rebuilt (and re-subtitled from Dominion of the Dark Djinn to Wrath of the White Witch) for the PlayStation 3.

The sales pitch was that the game was packed with hand-animated sequences produced by Studio Ghibli, which was so so hot back in 2010. These animations informed the rest of the design, from the pseudo-cell-shaded characters to the pseudo-hand-painted backdrops.

Now here's a proper sequel. It's set in the same other-world land of, sigh, Ding Dong Dell, and there's a bunch of politics going on between cat-people and usurping mouse-people, and also you initially control the President of Not the United States of America who has just been obliterated in a nuclear missile strike.

This is not a copy-paste error from another review. Ni no Kuni II, a game with cat people and mystical lands on the cover, opens with a line of SUVs blasting across a bridge toward a city which is then blown up by an ICBM.

President Roland then wakes up in the bedchamber of what I thought for at least ten minutes was a cat-girl, but it turned out to be a cat-boy. The palace has just fallen to a coup led by mice, and Roland decides that rather than waste time thinking about the millions of people who died in the nuclear strike, he'll just help this cat-girl-boy because, he has brought a gun to a sword fight.

Now, there's a lot more to Ni no Kuni II beyond this weird opening sequence but I really struggled to get over it. The original game focused on a boy named Oliver who lives in a little town and, due in some ways to his own recklessness, loses his mother in a tragic accident. His weird stuffed toy Mr Drippy comes to life and together they travel to another world, have wild adventures, befriend lots of cool characters, and force defeated monsters to be their battle-slaves. All in the name of finding a way to bring Oliver's mum back to life (oh and save the world too I suppose).

In Revenant Kingdom, Evan (the cat-boy) must avenge his father's death by... abandoning the kingdom the evil mouse Mausinger has usurped, and going and founding a new kingdom?

Where the original game did a sort of Pokemon-lite thing with little beasties called Familiars, Revenant Kingdom's hook is the ability to build up this kingdom via side-quests. It's a sort of very basic Sim City, except not really.

At some point developer Level-5 realised the Familiars had been a really big draw for Ni no Kuni so the game was (allegedly) delayed to insert little sprite-like elementals called, sigh, again, Higgledies.

Revenant Kingdom is one of those games that suffers for being a sequel to something that was a bit special. It's a good oddball JRPG. But Wrath of the White Witch had great storytelling, compelling characters, and epic boss fights. Revenant Kingdom just feels... smaller. *ANTHONY FORDHAM* PC

> Revenant Kingdom is one of those games that suffers for being a sequel...

WHY SHOULD I CARE?

+ You hate revolutionary mice
+ You want to shoot a mouse in the face
+ You want be President of Not the USA
+ You never had a PS3 to play the original

OR TRY THIS:

NI NO KUNI: WRATH OF THE WHITE WITCH
2013, LEVEL-5
- JRPG with Ghibli-goodness
- PlayStation 3 only

FINAL FANTASY VII
1997, SQUARE ENIX
- The definitive JRPG
- Remake incoming!

DIVINITY: ORIGINAL SIN 2
2017, LARIAN
- Vast and adaptive
- Not a JRPG?

VERDICT:
Destined to be known as "the other Ni no Kuni"

6

crucial by Micron

The memory & storage experts™

THE NEW

CRUCIAL® MX500 SSD

Faster. Bigger. Stronger. Easier.

Crucial® MX500 Solid State Drive

Sequential Read [1]	Sequential Write [1]	Random Read IOPS [1]	Random Write IOPS [1]
560MB/s	510MB/s	95K	90K

Join more and more people who are keeping their family videos, travel photos, music, and important documents on Crucial SSDs, and get the near-instant performance and lasting reliability that comes with solid state storage.

1. Based on the published specs of the 1TB model. Speeds based on internal testing. Actual performance may vary.

Start your system in seconds

Capacities up to 2TB

LIMITED FIVE YEAR WARRANTY

5-year limited warranty

Easy installation

learn more at www.crucial.com

Exclusive promotions also available at:

COMPUTER ALLIANCE · mwave · RAM CITY The Upgrade Experts™ · scorptec · SHOPPING EXPRESS .com.au · Umart online

Distributed by Bluechip Infotech Pty Ltd

Empires Apart

This all feels very familiar

DEVELOPER DESTINTYBIT • **PUBLISHER** SLITHERINE • **PRICE** $US29.99 • **AVAILABLE AT** STEAM
empiresapart.net

The most accurate thing I can say about Empires Apart is that it is a charming, old-school RTS for folks who still think Age of Empires is the high-point of real time strategy game design. And, given that a remaster of that game's recently come out, well, that must be a pretty sizeable demographic.

The worst I can say is that Empires Apart is essentially a lo-fi clone of Age of Empires, with little soul of its own, and no real innovation.

The game's charm comes from its blocky, colourful graphical style – it's particularly cartoon-like, which not only looks remarkably unique in this day and age of hi-res, photo-realistic graphics, but also means the game runs like a charm on even relatively ancient hardware. Maps are procedurally generated, so each game feels unique from that point of view. Units and buildings and tech trees, though, offer little new – this really is a case of 'if you've played Age of Empires, you know exactly what you're getting'. Archers and spearmen, farms and harvesting, build queues and faction upgrades – it's all there.

However, there's not a lot to the game's AI, which is both a blessing and a curse. It means that new players can stretch their legs without worrying about a horde of AI spearman rampaging through their peasant production lines, but it's not going to push you, either. There is one shining light here, though, and that's the challenge mode, which is a lot of fun. In this mode, you must build up your economy and military might to stave off ever-increasing enemy attacks, though they only attack at night. As the day/night cycle rotates, your view distance decreases, and you must ready your troops to defend your town hall.

> Archers and spearmen, farms and harvesting, build queues and upgrades... it's all there.

WHY SHOULD I CARE?

+ Too much Age of Empire is never enough
+ You have an older PC
+ The Byzantine Empire is the *best* empire

Straight matches against the AI, though… not so much fun. Aside from the Survival mode, there are Challenge modes for each faction, but the game's real lack is a long-term campaign mode.

Like Age of Empires, Empire's Apart is more thoroughly focused on PvP over PvE. The game's six factions are not only well-balanced, but quite uniquely designed. The Byzantines (hello, yes please!) are highly defensive, while the Mongols are much more suited to mobile attack. There are mess of ways to plat, from all-in player brawls, to four versus four matches, and co-op against AI opponents.

Being able to mix and match cool combinations of co-op factions makes for some neat strategising between partners, and the ability to run on even older laptops and PCs makes it a great game to fire up if you're fond having friends over for a LAN day.

Ultimately this is a game that you get out of what you put into it – if you miss those hoary old days of LAN parties with mates to play games like old-school Starcraft and Age of Empires, this will certainly scratch that itch. But if you're looking for a more cerebral, solo take on strategy game, Empires Apart thoroughly disappoints.
DAVID HOLLINGWORTH PC

OR TRY THIS:

MEDIEVAL II: TOTAL WAR
CREATIVE ASSEMBLY, 2006
- Much deeper gameplay
- Dated compared to modern releases

RISE OF NATIONS: EXTENDED EDITION
SKYBOX LABS, 2014
- Greater historical scope
- LOL tank-rush

AGE OF EMPIRES II HD
SKYBOX LABS, 2013
- Cheaper than Empires Apart
- Look at those sprites go

VERDICT:

An almost too accurate reimagination of Age of Empires, in both the best and worst possible ways.

7

Total War Saga: Thrones of Britannia

An early middle ages EPIC

DEVELOPER CREATIVE ASSEMBLY • **PUBLISHER** SEGA • **PRICE** $US44.99 • **AVAILABLE AT** STEAM
www.totalwar.com

I really do love the giant scope of Total War games, but after playing Thrones of Britannia, I really do think these more… intimate takes on grand strategy are what the company is really best at. Thrones of Britannia takes the epic scale of its usual games and crams it all into the British Isles, starting in the year 887, and letting you take control of one of the many factions vying for control of that green and pleasant land.

If you've played a Total War game before, there's only a handful of innovations to be found, but they are far-reaching. Arguably the greatest is that recruitment of new units is based on a global, rather than per-region, limit – which makes sense, given how limited local populations are in this period, and that recruiting often compromised essential tasks like farming. You're not going to build multiple elite armies in no time flat in Thrones. In fact, even trying to build up two armies will often put you at a disadvantage, as you outstrip the countryside's ability to keep your fighting forces fed – slow and steady is definitely the way to win this race.

The Saga side of the game is bit of a letdown, though. The game builds a strong narrative early on, but the struggles of keeping disparate populations – like Saxons and Vikings – happy gets a lot easier as the game moves on towards the end-game. By then you've more than likely gotten a grip on your growing kingdom, just in time to see off the invasions of various Norman and Viking factions that appear out of nowhere.

Well, not if you know your history…

The changes add a layer of new-game smell, but CA knows what they're selling by now, and having learnt from the near disaster of Rome II, Thrones delivers everything that fans of the series love, while making sure that the salient elements of the early middle ages (every time you call this period the Dark Ages, an academic somewhere gets really angry, trust me). You gather your forces, march on your enemies, and then pick them off army by army, and region by region. Units now unlock based on technological research, not building construction, and you can't even start researching tech until you've recruited a certain number of units, so the game has a more stolid pace, but that fits the period. Similarly, armies can feel very similar, despite a few culture-specific specialties – and, again, this attention to detail fits a period when the Shield Wall reigned supreme as THE battlefield tactic - and getting a unit in a strong position, and deployed in that formation, can be a real battle-winner. On the battlefield, combat plays out at a much slower pace – again, to the game's benefit. You feel like you've time to make the occasional mistake, or reposition a unit, without paying too high a price.

And it all looks spectacular.

The dedication to accuracy may put some fans off, but for my mind this is one of the best Total War titles in years.

DAVID HOLLINGWORTH PC

CRY HAVOC! And let slip those very good boys of war!

> This detail fits a period when the Shield Wall reigned supreme as THE battlefield tactic

WHY SHOULD I CARE?

+ You think you can unite England
+ You think shield walls are the best walls
+ You want to avenge the death of Ragnar Lothbrok
+ You want to celebrate the death of Ragnar Lothbrok

OR TRY THIS:

TOTAL WAR ATILLA
CREATIVE ASSEMBLY, 2015
- MOAR BARBARIANS
- Literally the most depressing TW game ever

WAR OF THE VIKINGS
FAT SHARK, 2014
- An intimate Viking experience
- Oh. Fat Shark closed the servers... Welp

THE BANNER SAGA
STOIC, 2014
- Brilliant art and combat
- Settle in for a trilogy

VERDICT:

With enough tweaks to make the game feel fresh, and enough of the same formula to keep the game comfortable, this is a great Total War entry.

9

Tech 271

YOUR GUIDE TO PC GAMING HARDWARE

Intel versus AMD... kinda

AMD doubles down on desktop, Intel goes mobile, and Dell? Well, read on...

We got to enjoy some quality jet-setting, this month. Both group editor Ben Mansill and our own senior journalist Chris Szewczyk were guests of the two biggest players in consumer CPUs - Intel and AMD respectively. And while they got flown far afield to get a taste of the next silicon generation, what this means for you are some cutting edge reviews and round-ups of the newest in gaming tech.

But there's another funny story, though.

While Ben was in China for the 8th gen Core i launch, he spied Dell's big dog and pony show about its new 8th gen laptops, and the way Dell was spruiking its hardware was... interesting. Dell was claiming that - essentially - if you want to cheat at PlayerUnknown's Battlegrounds, only 8th gen Dell machines could offer you enough power to run the latest and greatest 'plug-ins'. Ben couldn't believe his ears, and when I later wrote about this on PC PowerPlay's web site, it caused quite a stir.

So much so that Dell was in contact the next day to completely repudiate Dell China's assertion that cheating was A-OK.

Record-scratch - because hoo-boy is it not. Especially not when it's backed by one of the biggest hardware vendors in the world.

David Hollingworth

Editor

PC PowerPlay POWER AWARD

Our Power Award is given to products that are best in class no matter your budget.

PC PowerPlay SMART BUY

Our Smart Buy Award goes to products that balance performance with price tag.

Contents

61 Ryzen 2 CPUs
64 ASRock X470 Taichi
65 Asus Crosshair VII Hero Wifi
66 Gigabyte Aorus Gaming 5 Wifi
67 MSI X470 Gaming M7 AC
68 Intel's 8th gen CPUs
70 Asus ROG Zephyrus M GM501GS
71 Gigabyte Aorus X5 v8
72 MSI Raider GE63 8RF
73 Razer Blade Stealth
74 Metabox Prime X
75 Corsair Carbide Spec Omega
76 Corsair Carbide 275R
77 Asus ROG Strix XG32VQ & XG35VQ
78 Alienware AW3418DW
79 LG 32GK850G
80 Logitech X-56
81 Sennheiser GSP-600
82 Razer Elektra V2
83 Logitech G512 Carbon + Hyper X Alloy Elite
84 Razer Core v2
85 Asus ROG Strix Flare
61 Razer Hyperflux
61 HyperX Pulsure + Razer Goliathus

THE PCPP TESTBENCH

CPU
INTEL I7 7700K
intel.com.au

MOBO
ASUS Z270 ROG CROSSHAIR VI HERO
asus.com.au

RAM
2 X BALLISTIX 8GB DDR4-3200
crucial.com

PSU
CORSAIR 850W PSU
corsair.com

COOLING
H105 CORSAIR COOLER
www.corsair.com.au

CPU

AMD Ryzen 7 2700X & Ryzen 5 2600X Processors

AMD RYZING (yes, we went there)

PRICE $469 & $319
www.amd.com

It's hard to believe that it's been just over a year since AMD brought itself right back into the CPU game with the release of the Ryzen series of processors. It even forced Intel to respond to the Ryzen bomb by finally increasing the core counts across its range after years of incremental updates. Would we have even seen the six-core i7-8700K if not for the competition that AMD offered? Whatever the answer, Ryzen really did deliver competition, and highly compelling products that gave the consumer real choice. Now Ryzen gets its first update in the form the Ryzen 2000 series.

LET THE BATTLE RESUME!

The Ryzen 7 2700X and Ryzen 5 2600X we have on hand for this review are part of the family codenamed 'Pinnacle Ridge'. These are eight-core/16-thread and six-core/12-thread models respectively. The 2000 series uses the same fundamental Zen architecture as the first generation Ryzen CPUs from last year, though there are some tweaks that improve per-clock performance. They're built on a 12nm manufacturing process, which means – incredibly - that AMD is ahead of Intel on process technology in the mainstream segment.

Like all processors from the Ryzen family, they have unlocked clock multipliers for easy overclocking. They officially support DDR4-2933MHz memory, though - thanks to BIOS improvements - DDR4-3200+ shouldn't be too difficult. Our test system ran at 3200Mhz with no effort at all; quite the improvement given the initial troubles that first generation Ryzen had with memory compatibility. The new models will work on existing 300 series motherboards with a BIOS update, negating the requirement to purchase a new motherboard as you would have to if you invest in one of Intel's Coffee Lake CPUs.

Accompanying the Ryzen 2000 series CPU launch is the new X470 motherboard chipset. X470 models feature improved power circuitry, memory performance and additional optimisations. Of course any bugs and kinks found in first generation X370 motherboards are likely now a thing of the past.

Both the 2700X and 2600X come bundled with a version of AMD's

> AMD is claiming the new CPUs deliver up to a three per cent improvement in per-clock efficiency.

Wraith cooler. The Wraith Prism, bundled with the 2700X, features programmable RGB lights for the fan, logo, and fan shroud. You can control the RGB with popular motherboard utilities or you can use AMD's own application. It really does look very nice. It's probably the best 'stock' CPU cooler we've seen, both in terms of performance and looks. It also comes with switchable fan speeds. The 2600X comes with a Wraith Spire; a more standard cylindrical version that's definitely inferior to the Wraith Prism.

WHAT'S NEW UNDER THE HOOD?

AMD has made a few tweaks to improve performance, with the company claiming that the new CPUs deliver up to a three per cent improvement in per-clock efficiency. The biggest architectural changes relate to the cache and memory subsystem - AMD claims double digit reductions in cache and memory latency. When you add these incremental gains to clock speed improvements, along with improved boost functionality, clearly the 2000 series Ryzen models should be noticeably quicker than their 1000 series predecessors.

There are a few particularly noteworthy improvements. One is Precision Boost 2, or in generic terms, the turbo clock speeds. If first generation Ryzen hit full load on only two threads, it would drop back to the base clock. With the 2000 series, the drop off is much more linear, leading to longer and higher boosting turbo clocks. The processor can detect if all cores are lightly loaded for example, and keep the turbo clock at its maximum; this alone significantly raises the performance of the 2000 series.

The second improvement relates to the XFR, or Extended Frequency Range. In fact the 2700X is rated to clock itself as far as 4.3GHz - if your cooling allows.

Something that appears particularly interesting is tech AMD calls StoreMI, software included with all X470 motherboards. It's designed to pool different storage in the system into one unified solution. It's kind of like super-caching. You can merge your SSD, hard drive and even a part of your RAM into one storage pool. It even supports Intel's Optane products (seriously!). We look forward to analysing this feature in the future.

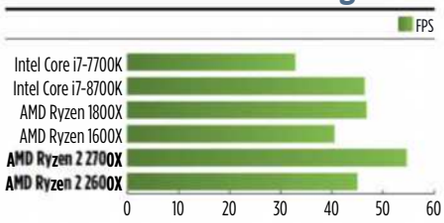
HOW'S THAT GAMING?

Gaming performance is one of those tricky things to measure and evaluate. For our testing, we set the resolution to 1080p and dialed back the image quality to reduce the load on the GPU. This creates something of a worst case scenario, though it is still relevant in the age of high refresh-rate monitors. In most real world gaming scenarios though, the limitation will be the GPU, and in this case, the Ryzen processors will draw neck and neck with their Intel competitors.

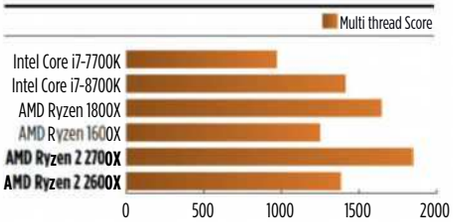
We spoke with Senior AMD Product Manager James Prior at a recent launch event and asked what AMD had focused on in order to improve Ryzen gaming performance. His detailed answer was quite informative. The first was the lack of developer optimisation for the then new Zen core. This is an ongoing process that's progressively improving through game patches and code base optimisations for many titles. The

▲ **Wraith Prism on the left, with its very pretty LEDS, and the simpler Wraith Spire on the right.**

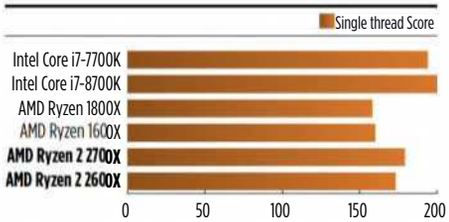
x264 FHD Video Encoding



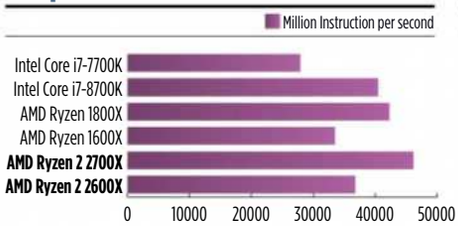
Cinebench 15



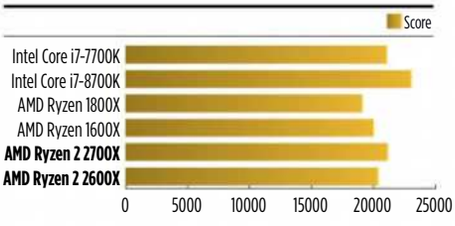
Cinebench 15



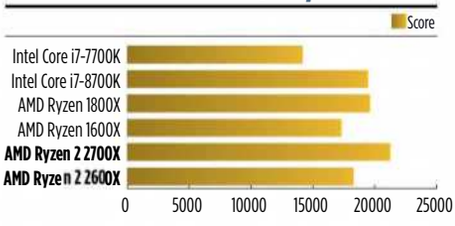
7Zip



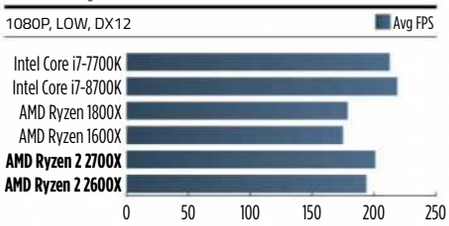
3DMark Firestrike



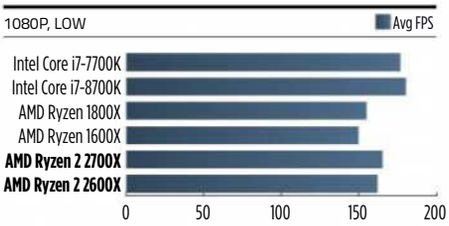
3DMark Firestrike (Physics)



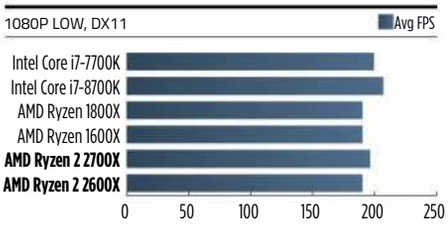
Rise of the Tomb Raider



Ghost Recon: Wildlands



Total War: Warhammer II



second reason is the 2000 series' aforementioned improved Precision Boost. The third reason is the improved memory latency and performance. These three factors really do explain the significant improvements we see in low-res gaming performance. The Intel i7-8700K, with its much higher top turbo speed, continues to hold the lead in CPU-limited scenarios, though we're pleased to see that AMD has made great strides to address this between Ryzen generations.

As you can see in our performance tests, AMD is exceptionally strong in multi-threaded applications. The 2700X streaks ahead of the 8700K, as we'd expect, but the 2600X also puts up a strong showing despite the aggressive turbo boosting capabilities of the 8700K

Overclocking has marginally improved, though it still remains a questionable endeavour given the limited gains. Our 2700X sample was capable of holding 4.3GHz across all cores, but not with 100 per cent stability. This is still better than the majority of 1800X samples. When you weigh up the performance improvements against the increases in heat output and power consumption, it's probably not worth it. Just let the AMD Precision Boost auto overclocking do its thing. We did not try to overclock the 2600X, though we're quite sure the same fundamental conclusion would apply.

Power consumption figures are a bit of a mixed bag. At idle, both the 2700X and 2600X sip less power than their predecessors, with just 43w measured at the wall. Under load though, they move ahead, though not by a lot. Under a gaming load, our highest reading was 278w for the 2700X and 256w for the 2600X. Still not bad for a system equipped with a GTX 1080 Ti! Temperatures were also very good for a 'stock' cooler. The Wraith Prism is highly capable in every scenario apart from heavy overclocking.

THE SEQUEL IS SO MUCH BETTER

Zen was already good. It's no major leap to say that Zen+ is much better. We expected only minor improvements over first generation Ryzen, but we were pleasantly surprised to see that AMD have delivered much more than that. Performance is up across the board and the gaming deficit to Intel is smaller. They remain excellent value and they come with an effective cooler. AMD continues its strong execution. It seems AMD will continue to take market share from Intel. *CHRIS SZEWCZYK*

TESTED USING:
Motherboard: Asus ROG Crosshair VII Hero WiFi
Graphics: Nvidia GTX 1080 Ti Founders Edition
RAM: 2x8GB Crucial Ballistix DDR4-3200 16-18-18-36
Power Supply: Antec HCP-1200W
Storage: 1Tb Samsung 960 EVO M.2 SSD
Cooling: AMD Wraith Prism
Operating system: Windows 10 Pro 64-bit

KEY SPECS:
AMD Ryzen 7 2700X, 12nm, Socket AM4, 8 cores/16 threads, 3.7GHz base clock, 4.3GHz max boost clock, supports DDR4-2933, 16Mb shared L3 cache, 213mm2 die size, 105W TDP, Wraith Prism CPU cooler

AMD Ryzen 5 2600X, 12nm, Socket AM4, 6 cores/12 threads, 3.6GHz base clock, 4.2GHz max boost clock, supports DDR4-2933, 16Mb shared L3 cache, 213mm2 die size, 95W TDP, Wraith Spire CPU cooler

PC PowerPlay POWER AWARD

+
- Excellent value
- Both models are significantly faster than their predecessors
- Quality bundled coolers
- Backwards compatibility with 300 series motherboards

-
- OC headroom is still limited
- Gaming performance is still weaker than Intel

VERDICT:

The Ryzen 7 2700X and Ryzen 5 2600X are even better than their highly regarded predecessors. AMD shakes up the market again.

2700X: 9
2600X: 9

MOTHERBOARD

ASRock X470 Taichi

ASRock finds its inner zen

PRICE $339
www.asrock.com

ASRock seems to have carved out a niche for itself in an era where motherboard branding seems to be increasingly targeted towards gamers. While in reality a gaming board might share 99 per cent of its DNA with any other motherboard, the Taichi branding does seem to be successfully engaging non-gaming power users with its excellent combination of features and affordable price. The X470 Taichi is the latest entry in the series and it promises to be yet another hit in the sweet spot.

The X470 Taichi looks like a high-end board and it has features to match. It really is lovely looking, with the chipset heatsink's gears and cogs being a nice artistic touch. Of course there's a splash of RGB around said heatsink as well as above the I/O cover. It also has a monstrous VRM cooling solution, a common improvement among the boards in this roundup.

ASRock has included 8-pin and 4-pin CPU power connectors mated to a massive 16-phase power delivery system. There's also eight SATA connectors for the file hoarders out there. It's the only board in the roundup to feature eight. That's a particularly noteworthy feature despite the Taichi being the cheapest board in the test. There's also dual M.2 slots but unlike other boards in this test, they lack any type of heat dissipation shielding.

The rear I/O is well-equipped, with 802.11 AC WiFi built in. There's six USB 3.0 ports, as well as a pair of 3.1 ports, one of which is a Type-C. Note there are no USB 2.0 ports present though there are internal headers; we also have Intel's I211AT LAN onboard. There's a HDMI port present, which means the X470 Taichi is fully capable of utilising the graphics capabilities of the Ryzen APUs. Note there is a higher-priced SKU called the Taichi Ultimate, which adds 10G LAN to its repertoire. Nice!

ASRock has really improved its BIOS implementations over the years and the X470 Taichi continues to feature one of the easier to navigate BIOS layouts on the market. If you're an expert user, there's plenty there to tweak to your heart's delight.

Probably about the only real weakness of the X470 Taichi was its slightly weak performance versus the rest of the field. Though the differences are only minor, it was something that was noticeable consistently. Otherwise the ASRock would likely have won the roundup. This is the kind of small difference that could be explained by a rogue memory timing or two, and the gaps are not significant enough to make it a poor motherboard by any means.

> If you're an expert user, there's plenty in the BIOS to tweak to your heart's delight.

When it comes to overclocking, the Taichi acquitted itself well in terms of CPU overclocking, with a stable 4.275Ghz achieved. Our 2700X sample *wants* to be stable at 4.3G but stubbornly refuses to pass intensive benches.

The Taichi brand sets itself apart by offering top features at a midrange price. It looks great, has an easy to navigate BIOS and the build quality to match the higher priced offerings. It's just that tiny bit slower, which prevents it from getting a top gong. *CHRIS SZEWCZYK* PC

+
- Excellent value
- Feature rich
- HDMI port inclusion

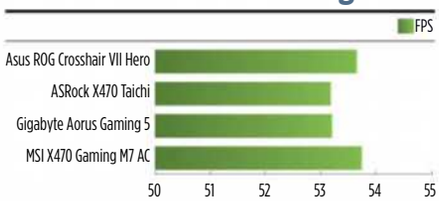
-
- Slightly behind in performance
- Memory compatibility needs some work

VERDICT:
ASRock has always represented great bang for your buck, and the X470 Taichi is no exception.

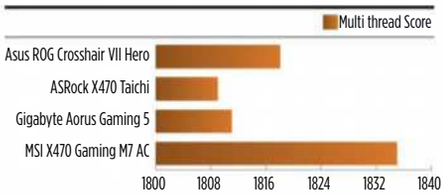
8

AMD X470 motherboard benchmarks

x264 FHD Video Encoding



Cinebench 15 multi thread



MOTHERBOARD

Asus Crosshair VII Hero WIFI

The hero Asus needs?

PRICE $499
www.asus.com.au

No high-end motherboard comparison would be complete without an entry from the Asus ROG series. Now that Ryzen is well and truly shaking up the market, the Crosshair has a lot more eyes upon it.

As you'd expect from any ROG board, the feature list is comprehensive. A single 8-pin power connector is adequate for normal overclocking operations, and Asus has included an extra 4-pin connector if you need the extra juice for chasing some HWbot points.

A few things are apparent when examining the physical layout and design. The RGB implementation is somewhat subtle. Perhaps we have reached 'peak RGB' with just the PWM and chipset heatsinks having RGB accents. We've also got power and reset buttons on board, a metal heatsink for a single M.2 drive, and beefed up heatsinks to take care of Asus' typically strong PWM system. It's an attractive and functional layout.

The I/O area has an integrated shield and is chock full ports. There are no less than twelve USB ports, eight of which are USB 3.0 as well as a pair of USB 2.0 ports. There's also the now standard Type-A and Type-C USB 3.1 pair. AC Wi-Fi is becoming more and more prevalent and the Asus, like all the other boards in this roundup, has it included as standard. There are the standard six SATA ports and a pair of M.2 slots to take care of storage needs. If we are to nit-pick, perhaps an extra pair of SATA ports would be nice at this price range, as the Asrock Taichi does despite its much cheaper price.

Asus' ROG UEFI BIOS is little changed from previous generations. Users familiar with Asus BIOS will be right at home, however it can be a bit overwhelming at times for inexperienced users. The usual ROG BIOS refinement is ever present of course. It's packed full of options, everything from the basics to the esoteric.

We expect nothing less than excellent performance from every ROG board we test, and the Asus acquits itself well. With our test sample's BIOS, Asus had set the performance to an 'enhanced XFR' mode, which relaxes the default power limits and enables better performance. Many other boards also have similar settings though we turned it off to facilitate better comparative performance. In our tests, the Hero wins a couple of tests, and performed particularly well in the AS-SSD storage tests, holding a clear lead over the pack in this demanding SSD test with a Samsung 960 Pro SSD.

Our CPU sample can clock to around 4.3GHz but it is proving difficult to get it fully stable at this speed. None of the tested boards were able to pass Cinebench with all cores loaded at any voltage, though at our proven stable 4.275 Ghz, the Asus was bang on the money.

> We expect nothing less than excellent performance from every ROG board we test - and this is no exception.

If you're a long time member of the Republic of Gamers, you won't be let down by the Crosshair VII Hero. It's got everything you'd expect to see included in a 'mid-tier' ROG board. It's just that at this price it needs something extra to set itself apart from the capable and cheaper chasing pack. *CHRIS SZEWCZYK* PC

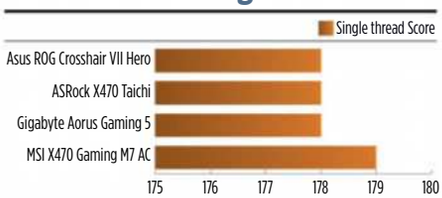
+
- Effortless overclocking
- Excellent software suite
- Excellent storage performance

-
- Expensive

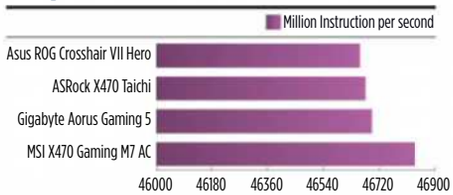
VERDICT:
Asus has produced another stellar ROG motherboard, but at this price it needs something extra to make it truly stand out

8

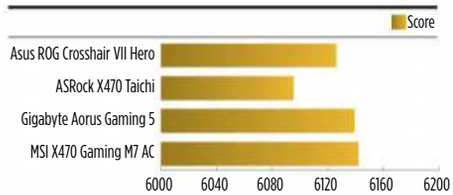
Cinebench 15 single thread



7Zip



PCMark 10



MOTHERBOARD

Gigabyte Aorus Gaming 5 Wifi

Aorus on the attack

PRICE $349
www.gigabyte.com.au

Gigabyte's Aorus brand may not have the long standing reputation of Asus' ROG moniker, but it is making great strides towards building its own legacy. Aorus boards typically strike a great blend of high-end features without breaking the bank, something we see repeated here, with the Aorus Gaming 5 going for just $349 at the time of writing.

We'd never describe Aorus boards as subtle, but Gigabyte has clearly toned down the rather extreme use of RGB in favour of a more refined look. There's still plenty of lighting adorning the board, but the overall look is a much better blend of bling and functional aesthetics.

Despite the affordable pricing, Gigabyte has not skimmed down on features. There's an 8+3-phase power delivery system powered by a single 8-pin auxiliary power connector. This may seem somewhat weaker than the other motherboards on test, but the truth is you don't need an excessive PWM design for real-world overclocking. overclocking, the included design is perfectly adequate.

Gigabyte has paid particular attention to the audio solution, with the inclusion of WIMA capacitors and a pair of adjustable voltage USB ports (the yellow ones on the rear panel) - A stable 5V power output is critical for sensitive devices like audio DACs.

The I/O area has a good helping of ports including AC Wi-Fi antennas. There's a complement of USB ports, with two USB 3.1 (Type-A and Type-c), four 3.0 ports and a four 2.0 ports. A total of ten ports should be enough for most. There's also a welcome HDMI port, which means the Aorus Gaming 5 can make full use of the video capabilities of Ryzen APUs. There's six SATA ports and a pair of M.2 slots. One of them features a rather hefty heatsink that should be beneficial given its placement adjacent to the graphics card.

The Aorus Gaming 5 performed well in our benchmark test suite. We'd expect boards that are part of a mature platform ecosystem to perform within one or two per cent of each other at worst, so there are no surprises with the Gaming 5. Its memory performance appears to be strong, and our G.Skill DDR4-3200 Mhz test kit ran without issue from the first boot. The score in our SSD test was a touch behind the Asus and MSI boards, but a couple of percent is nothing to be too concerned about.

Overclocking proved to be a simple task, though like all the other boards in the test, 4.3 Ghz seems to be just beyond the capabilities of our sample.

> Despite the affordable pricing, Gigabyte has not skimmed down on features...

It replicated the 4.275 GHz OC we achieved elsewhere though. Memory overclocking was also successful, with our test kit able to boot and run at DDR4-3600 without an issue.

Gigabyte continues to be aggressive on price, which means a win for the consumer. The Aorus Gaming 5 WiFi will extract the most from your shiny new Ryzen processor, look good doing it, and ticks all the key feature boxes. We have to reiterate that the list price is just $349, making it quite the steal indeed.
CHRIS SZEWCZYK

+
- Excellent value & features
- Strong memory performance
- Appealing new aesthetic

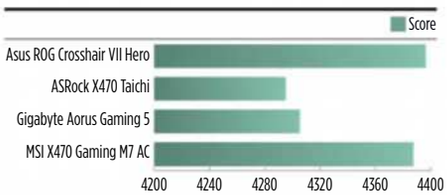
-
- The BIOS is not as comprehensive as some

VERDICT:
Superb value without compromising on features or quality makes this Aorus an excellent proposition

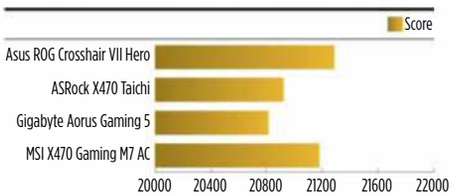
PC PowerPlay SMART BUY

9

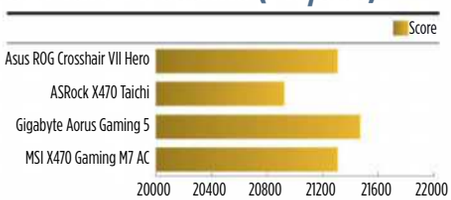
AS-SSD



3DMark Firestrike



3DMark Firestrike (Physics)



MOTHERBOARD

MSI X470 Gaming M7 AC

MSI gets the balance just right

PRICE $419
www.msi.com.au

MSI has aggressively targeted the PC gaming market more than any other manufacturer, having transformed almost its entire high-end branding over to a gaming theme. This trend continues with the release of MSI's X470 motherboards where the Gaming M7 WiFI is for now the highest end AMD offering from MSI.

As you'd expect in this price range, MSI has equipped the M7 with an enthusiast feature set. The board appears to be running a 12+2-phase power delivery system that's cooled by chunky metal PWM heatsinks. It seems that VRM cooling is no longer a concern as none of the tested boards had any heat related issues. MSI has clearly built the board to withstand a heavy overclock. It's also the only board in the test to come with dual 8-pin auxiliary power connectors, meaning there's plenty of overhead on tap. There's power and reset buttons, and there's a Game Boost auto overclock dial for a quick OC.

We have to pay particular attention to the massive integrated chipset and M.2 heatsink assembly. The whole mechanism swings up to reveal two thermal cooling pads that fit snugly onto the top of M.2 drives. It feels extremely robust and provides a great deal of surface area for cooling the M.2 drives.

The entire board gives the impression that it's built to last, with minimised plastic adornments compared to many other boards. Looks wise, MSI has rolled back on the RGB overload, with a much more subtle implementation that can be controlled by MSI's Mystic light software.

Along with AC WiFi, MSI has equipped the M7 with Killer Network's E2500 Gigabit LAN controller. Killer NICs have received their fair share of criticism over the years, but many people don't realise you can install a tiny .inf driver file that alleviates a lot of the criticism of heavy CPU overhead when using the full Killer software package.

The I/O area lacks the integrated heat shield of the Asus and Gigabyte, but it still has all the required ports as we'd expect. There's an adequate complement of USB ports, with two USB 3.1 (Type-A and Type-C), four 3.0 ports and a pair of 2.0 ports. The X370 Gaming had a couple more USB, so that would have been nice, but really, eight should be plenty for most users. There's six SATA ports and a pair of M.2 slots take care of storage needs.

The easy to navigate and logical grouping of essential BIOS settings is a particular highlight, both for novice and expert users.

The MSI performed exceptionally well in our test suite and stands out with excellent out of the box performance. While the differences are small, it's better to lead the pack rather than trail it. We were able to set DDR4-3600, set the voltage at 1.35v and it happily booted and stress-tested without an issue. We were quietly hopeful we could get our stubborn 2700X stable at 4.3Ghz, but like with every other board, it was not to be. We have to accept that this CPU sample just will not settle at 4.3Ghz.

> "It's also the only board in the test to come with dual 8-pin auxiliary power connectors..."

MSI has produced a gorgeous motherboard that oozes appeal. *CHRIS SZEWCZYK* PC

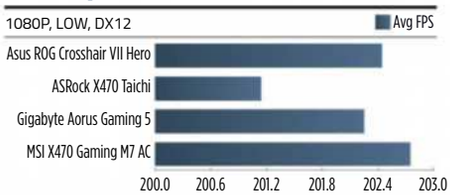
+
- Fast out of the box performance
- Top notch build quality

-
- Lacks an integrated I/O shield

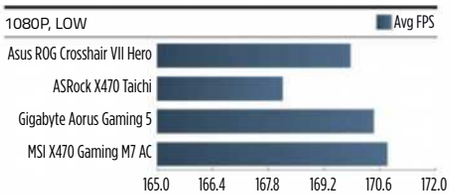
VERDICT:
MSI has produced a motherboard that ticks all the boxes. Performance, features, and value.

PC PowerPlay POWER AWARD **9**

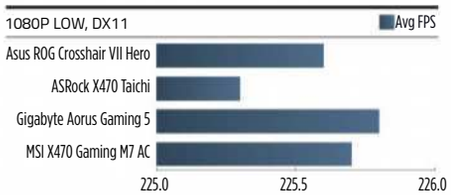
Rise of the Tomb Raider

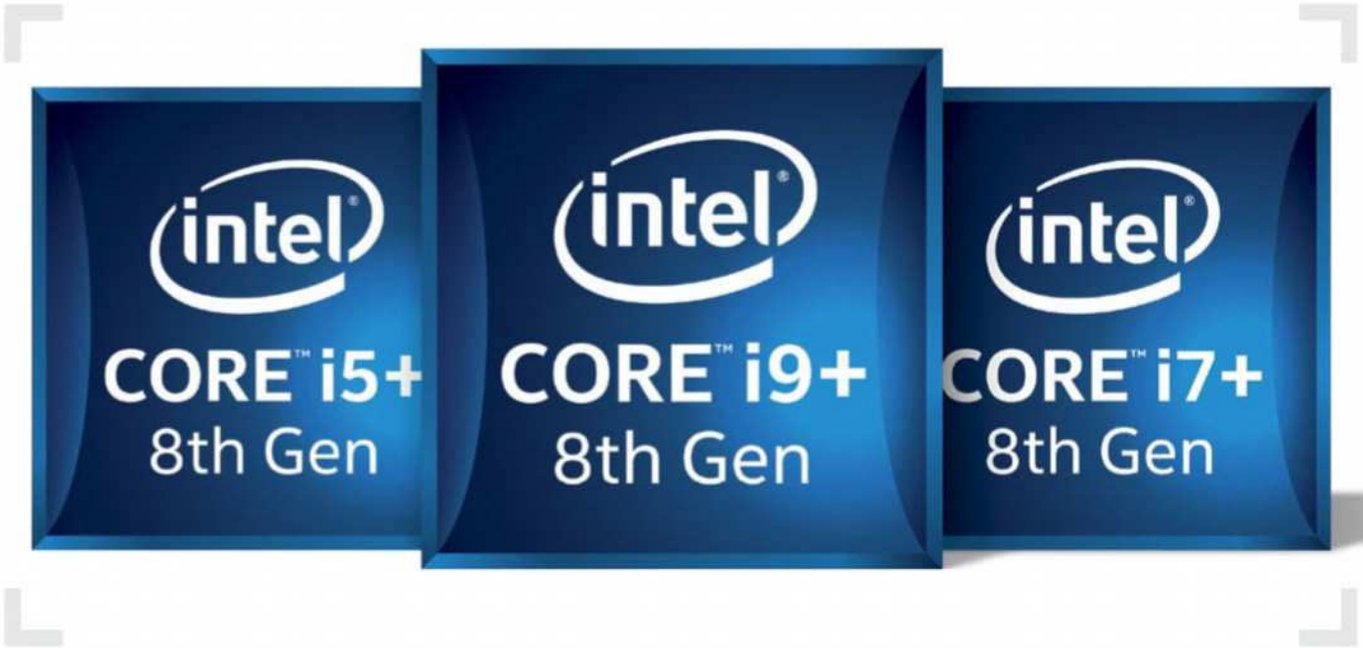


Ghost Recon: Wildlands



Total War: Warhammer II





INTEL TAKES MOBILE CPUS BEYOND FOUR CORES

New 8th-gen mobile monsters, and some new desktop CPUs

Intel's assault on mobile computing enters a new phase as the company announced its 8th-gen mobile CPUs, including for the first time (for Intel), five new 6/12 thread mobile parts

Alongside the seven new performance parts, Intel also has four new standard mobile CPUs, for a total of 11 mobile 8th-gen CPUs. Among these are a i9 part (also the first time this series, albeit quite new, has a mobile version) and two new Xeons.

One, and just one, is fully unlocked and overclockable – being the highest-end i9-8950HK, which is no surprise given that these mobile i9 CPUs are effectively cherry picked i7s for better thermal range - however another (the i7-8860H) is "partially' unlocked, specifically meaning it can be overclocked by up to 400MHz.

But that's far from the end of the overclocking party, Intel introduced its new Thermal Velocity Boost, though this is only available for the Core i9-8950HK part. It boosts a single core by an additional 200MHz over stock Turbo when the CPU is at 50c or less. It is automatic and workload dependent and also depends on available power.

The new mobile CPUs come in under either the U-Series badge covering i3, i5 and i7 mainstream parts, and the H-Series for the performance products that cover higher-end i5, i7 and i9 including the Radeon Vega IGP products.

All are manufactured on the 14nm++ process and are claimed to be nearly 30% faster than the 7th-gen CPUs from this time last year. We look forward to testing this!

NEW 8TH GEN INTEL® CORE™ PERFORMANCE MOBILE PROCESSORS

Processor number	Base clock speed (GHz)	Intel® Turbo Boost Technology 2.0 maximum single core turbo frequency (GHz)	Cores/ Threads	Thermal Design Power	Unlocked[2]	Intel® Smart Cache	Memory support	Intel® Optane™ Memory Support[12]	Intel® vPro™ Technology Eligible[14]
Intel® Core™ i9-8950HK	2.9	4.8[11]	6/12	45	√	12 MB	Two channels DDR4-2666[1]	√	
Intel® Xeon® E-2186M	2.9	4.8[11]	6/12	45		12 MB	Two channels DDR4-2666[1], ECC	√	√
Intel® Xeon® E-2176M	2.7	4.4	6/12	45		12 MB	Two channels DDR4-2666[1], ECC	√	√
Intel® Core™ i7-8850H	2.6	4.3	6/12	45	Partial	9 MB	Two channels DDR4-2666[1]	√	√
Intel® Core™ i7-8750H	2.2	4.2	6/12	45		9 MB	Two channels DDR4-2666[1]	√	
Intel® Core™ i5-8400H	2.5	4.2	4/8	45		8 MB	Two channels DDR4-2666[1]	√	√
Intel® Core™ i5-8300H	2.3	4.0	4/8	45		8 MB	Two channels DDR4-2666[1]	√	

▲ **The performance mobile CPUs**

BETTER OPTANE

An improved version of Optane comes to the 8th-gen mobile platform, along with a new marketing badge for systems that ship with an installed Optane module ("i5+, i7+ and i9+").

Unlike previous Optane implementations which cached and boosted OS drive performance, it can now be used to boost performance of data drives - as in, your Steam and app drive. Intel call it Data Drive Acceleration, sensibly. It cannot be used for BOTH the data drive AND OS drive. That's a limitation of the driver, I was

told, not anything like PCIe lanes or the currently small capacity of Optane products. Most gaming laptops are sold with a large capacity hard drives so it makes sense to Optane-boost that instead of a smaller OS SATA SSD – assuming it has one.

The whole idea – at least as far as the gaming-centric pitch was concerned – is for quicker loading times in games. Intel quoted an almost doubling on a level loading demo of 10 seconds with Optane vs 18 seconds without, plus a few more FPS in some games. This was in a comparison against a TLC SATA SSD.

Optane was also touted as being a perfect fit for content creation, with an eSport professional on a pre-record telling us that "the quicker the guys can get footage out there the better they do."

NEW 8TH GEN INTEL® CORE™ MOBILE PROCESSORS

Processor number	Base clock speed (GHz)	Intel® Turbo Boost Technology 2.0 maximum single core turbo frequency (GHz)	Cores/ Threads	Thermal Design Power	Intel® Smart Cache	Memory support	Intel® Optane™ Memory Support[22]
Intel® Core™ i7-8559U	2.7	4.5	4/8	28	8 MB	Two channels DDR4-2400[23]	√
Intel® Core™ i5-8269U	2.6	4.2	4/8	28	6 MB	Two channels DDR4-2400[23]	√
Intel® Core™ i5-8259U	2.3	3.8	4/8	28	6 MB	Two channels DDR4-2400[23]	√
Intel® Core™ i3-8109U	3.0	3.6	2/4	28	4 MB	Two channels DDR4-2400[23]	√

▲ **The mobile value range**

NEW 8TH GEN INTEL® CORE™ DESKTOP PROCESSORS

Processor number	Base clock speed (GHz)	Intel® Turbo Boost Technology 2.0 maximum single core turbo frequency (GHz)	Cores/ Threads	Thermal Design Power	Intel® Smart Cache	Memory support	Intel® Optane™ Memory Support[22]	Intel® vPro™ Technology Eligible[45,46]	RCP pricing (USD 1K)
Standard Power									
Intel® Core™ i5-8600	3.1	4.3	6/6	65	9M	Two channels DDR4-2666[41]	√	√	$213
Intel® Core™ i5-8500	3	4.1	6/6	65	9M	Two channels DDR4-2666[41]	√	√	$192
Intel® Core™ i3-8300	3.7	N/A	4/4	62	8M	Two channels DDR4-2400[42]	√		$138
Low Power									
Intel® Core™ i7-8700T	2.4	4	6/12	35	12M	Two channels DDR4-2666[41]	√	√	$303
Intel® Core™ i5-8600T	2.3	3.7	6/6	35	9M	Two channels DDR4-2666[41]	√	√	$213
Intel® Core™ i5-8500T	2.1	3.5	6/6	35	9M	Two channels DDR4-2666[41]	√	√	$192
Intel® Core™ i5-8400T	1.7	3.3	6/6	35	9M	Two channels DDR4-2666[41]	√		$182
Intel® Core™ i3-8300T	3.2	N/A	4/4	35	8M	Two channels DDR4-2400[42]	√		$138

▲ **What's new in the 8th-gen desktop range**

DESKTOP

The desktop products are equally expansive though came in a distant second place in terms of hype at the launch event. Perhaps because the emphasis was on gaming and the new desktop CPUs and platforms are decidedly mainstream. Most of the range covers i3 and i5, and six of the nine new CPUs are low power. There is but one i7 and that too is a low power item.

The two cheapest i3 CPUs (8300T and 8100T) are interesting, with prices of US$138 and US$117 an stock speeds of 3.2 and 3.1GHz they outpace the new higher end i5 and i7 CPUs, though don't Turbo Boost, on the flipside. Memory speed support across the board is conservative at 2400 - 2666MHz.

NEW CHIPSETS

Intel has supported the value CPUs with the expected H, Q and B versions of the 300 series chipset. These range from the super basic H310 with just six PCIe 3.0 lanes to the relatively more featured Q370 with 24 lanes and 14 USB ports. These should offer appealing implementations in budget gamer boards that compare relatively well in basic performance with the pricier Z370 series.

IT'S ALL ABOUT GAMING

Gaming has taken an increasingly front row seat with Intel's marketing and here it was all of everything, almost. The first 20 minutes of the presentation was gaming and nothing but. Given that the global launch was in Beijing it made sense for Intel to underline just how important gaming is. The Chinese market is driving a massive global surge in gaming laptop sales. No other category comes close in terms of growth and sheer domination. 56% of all gaming laptops last year were sold in China, and here in China gaming laptop sales grew by 52% in the last year. Massive.

The spinoff affects the rest of the world. The demand for gaming laptops is by no means unique to China – it's just that this territory has the biggest numbers. Thus, worldwide demand is being met by this diverse range of new CPUs from Intel, from super-budget i3s through to the meaty i9 - and this is no paper launch, dozens of machines are ready to roll from pretty much every OEM.

> "The desktop products are equally expansive though came in a distant second place in terms of hype..."

POWER FOR OTHER THINGS

Some may say that it is AMD's Ryzen range that spurred Intel's move beyond 4 cores, and there is some truth in that but applications now demand more and last year's 6/12 core i7-8700K (Intel's first consumer CPU in that configuration) turned out to sell more units than ANY i7 before it.

So there's a lot of confidence within Intel that beyond-4-core CPUs have a home in mobile. OEMs agree. It's actually quite an exciting new range of CPUs, accompanied by some beastly new laptops. *BEN MANSILL* PC

LAPTOP

Asus ROG Zephyrus M GM501GS

The Zephyrus claims to be the king of performance notebooks. But is it?

PRICE $3,599
www.asus.com/au

Asus' ROG Zephyrus was one of the first notebooks that was designed to be svelte in size but a beast when it came to gaming. This black beauty, with its sharp lines and glowing details sure looks great, although having 'Republic of Gamers' branding all over it will make boardroom brethren suspicious.

Opening the Zephyrus' lid famously simultaneously opens up an exhaust port at the rear of the base for enhanced cooling. While this sounds cool, in reality a plastic flap opens to reveal a heatsink. If it doesn't sit on flat surfaces it bends and distorts.

But is this a gaming beast? The latest version comes with a Coffee Lake hexa-core, Core i7-8750H, which offers a 2.2GHz stock speed, 3.9GHz Turbo Boost (which can push to 4.1GHz on a single core). There's a 512GB NVMe SSD, 16GB RAM and a 1TB hybrid hard disk for storage. Nvidia's GTX 1070 GPU provides gaming grunt. This should amount to top-tier performance, but we were disappointed.

Firstly, you need to ensure the fans operate in 'Overboost' mode to achieve the best performance. Even then the temperature can ramp up – especially the CPU. We torture-tested it with crypto-mining and both CPU and GPU hit 78°C, which isn't terrible, but the CPU shouldn't get so hot when it's hardly being used.

In 2D benchmarks it was 11 per cent slower than MSI's Raider, which has a similar spec. This translated into games, too, where it was 5fps slower than MSI in Ghost Recon and several fps slower in Warhammer 2. It's certainly quieter than the Raider but at full pelt the Zephyrus still emits a very-audible whoosh with a hint of high-pitched whine. The ROG Gaming Center monitors everything but noticeably offers no GPU overclocking ability – not surprising when it struggles to consistently hit stock speeds due to thermal throttling.

In terms of general usage, we're big fans though. The keyboard is well-laid out, plus travel and stiffness approach perfection. There's a number pad and everything has RGB backlighting; the trackpad feels good and responsive.

The speakers are superb; delivering well-rounded audio and punchiness to treble and bass-rich music alike.

Connectivity is a mixed bag, though. There are four USB-A ports, one USB-C plus a 3.5mm audio jack. There is an HDMI port but neither a DisplayPort nor (and this is an issue for gamers) wired Ethernet.

The 15.6-inch screen is very crisp, uniformly lit and displays accurate colours. It's also 144Hz for smooth gaming.

> "The ROG Zephyrus is almost a great notebook, but its thermal throttling issues are real."

In terms of portability, we struggled to get it lasting more than 100 minutes under any task, which was disappointingly low. At least the 2.2KG weight is keeps it portable.

This ROG Zephyrus is almost a great notebook, but its thermal throttling issues are real. If you're going to pay close to four grand for a notebook there shouldn't be any limits but limiting is what this notebook's performance is mostly about. *NICK ROSS* PC

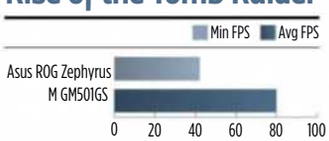
+
- Looks good
- Feels good
- Excellent speakers

-
- Relatively slow
- Mediocre battery

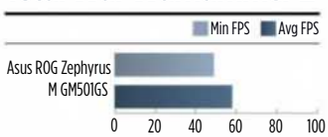
VERDICT:
Thermal throttling pacifies performance on a very expensive notebook

7

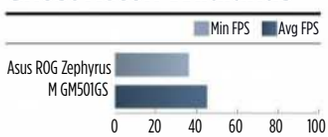
Rise of the Tomb Raider



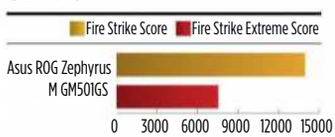
Total War Warhammer 2



Ghost Recon Wildlands



3DMark



LAPTOP

Gigabyte Aorus X5 v8

One great big hunka gaming power.

PRICE $3,699
www.gigabyte.com.au

Gigabyte's Aorus X5 fully-featured, gaming laptop has been around for a while now. This latest v8 refresh comes with Intel's 8th generation, Core i7 Coffee Lake processor and promises to fly like never before.

Our review unit came with the high-end, 2.6GHz Core i7-8850H CPU. All six cores Turbo Boost to 4GHz while one pushes to 4.3GHz. It's flanked by 16GB RAM, a big-and-fast 500GB NVMe SSD plus there's a 1TB HDD for storage. Graphics come via Nvidia's GTX 1070.

Something to note about beefy machines like this is that performance will depend on temperature and cooling. When warm the fans ramp up noisily regardless of the task you're preforming but especially so if gaming or, say, crypto-mining. This was an issue when using Gigabyte's overclocking tool - when we maximised all settings, one of our benchmarks actually ran slower due to thermal throttling. But this all becomes a moot point as there are few tasks it can't blitz through.

Nonetheless, in Fire Strike, maximum GPU overclocking saw a paltry 0.2 per cent speed boost which increased to almost-0.5 per cent in Fire Strike Extreme. Hmmm.

Battery life is hard to gauge. Despite forcing all power options to maximum, performance automatically winds down when on batteries. So while it ran flat out in PCMark for almost three hours, it did so achieving a score that was thirty per cent slower than when plugged in. It did play a Full HD movie for three-and-three-quarter hours though.

For a 15.6-inch notebook, it's on the rather-chunky side. There's a thick bezel around the screen, the chassis significantly extends behind the lid (it's got a big bum) and there are still gaps to the side of the full-complement keyboard which includes a number pad, arrow keys and even gaming macro keys. It's no massive, gaming beast of yore, but at 2.6KG it's not particularly-portable either and you'll have to carry the sizeable power brick around with you too.

The Full HD screen is excellent though. It's uniformly lit, Pantone-certified for colour accuracy, has a matte, anti-glare finish and is 144Hz for smooth gaming. There's also a full complement of ports including two of both USB-C and USB-A sockets, which are USB 3.1 compatible. There's also mini DisplayPort, separate headphone and mic jacks, a high-speed SD-card slot and full-size HDMI. At the rear are another two USB-A ports, plus Gigabit Ethernet.

The speakers get loud but have very little bass or punch. Our main gripe is with the (RGB-lit) keyboard, though, which too-frequently double-registers key presses and is off center to the point where extended typing hurts your back. It's a good layout for gamers using a mouse, though. The trackpad is okay but not the most responsive we've used.

> It's no massive, gaming beast of yore, but at 2.6KG it's not particularly-portable either...

At $3,699 it's very expensive and starting to feel a bit chunky and unrefined in the current market: MSI's Raider is much cheaper with similar specs, for instance. But it's a fully-featured beast of a machine and that will still appeal to many. *NICK ROSS* PC

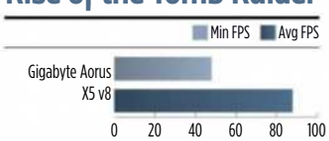
+
- Very fast
- Good connectivity
- Good screen

-
- Expensive
- A bit chunky

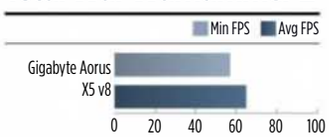
VERDICT:
Chunky and expensive, but well-featured and very fast.

7

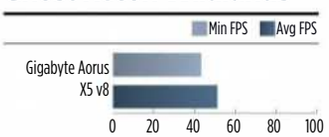
Rise of the Tomb Raider



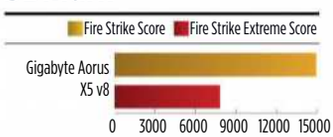
Total War Warhammer 2



Ghost Recon Wildlands



3DMark



LAPTOP

MSI Raider GE63 8RF

Is MSI's all-rounder a lemon or a Lambo?

PRICE $2,999
au.msi.com

MSI makes a bewildering array of gaming laptops. They come in all shapes and sizes from big, noisy and fast, to thin, light and portable. The Raider GR63 seeks to be an all-rounder – a gaming notebook that remains portable and sober enough to use for work.

While MSI might not be the coolest moniker, its dragon badge makes amends. Cooler still are the pulsating, glowing streaks on the lid, which impressed everyone who saw them.

It's also well-built with a solid chassis and a screen which hardly flexes. The 15.6-inch Full HD screen is matte and reflection-proof. It gets very bright but it's not as crisp or uniformly-lit as rivals. It's no deal breaker but text on a white background can show discolouration, especially when scrolling. Viewing angles are mediocre. However, the 120Hz refresh rate makes gaming smoother.

But that's it for criticism. MSI's SteelSeries RGB keyboard is a joy to use both for gaming and typing. There's a full complement of keys (including a number pad and full-sized arrow keys) and they're well laid out. The trackpad is feels good and responsive. There's a useful Dragon Center shortcut button and a max-fan button. The latter is important.

MSI's many models mean it's created a plethora of cooling systems and, in this type of laptop, cooling is a big deal as performance drops considerably when things get too hot. It's so reliable that we consistently achieved seven per cent speed boosts when ramping-up the overclocking settings. While this isn't much, competitors regularly run significantly slower due to overheating when overclocked. Be aware though, that at max power, these fans get very loud. You can throttle them though.

But what of the performance? This Raider uses Intel's new Coffee Lake, hexa-core, Core i7-8750H processor which has a stock speed of 2.2GHz but all cores can Turbo Boost to 3.9GHz (one can push to 4.1GHz). This, along with 16GB RAM plus a 256GB NVMe SSD hard disk, make it fly along for all 2D tasks. There's also a 1TB mechanical drive for storage.

For gaming there's Nvidia GTX 1070 graphics. This never dropped beneath 30fps in any of our game benchmarks while its Fire Strike score was higher than more-powerful rivals, likely due to its cooling capabilities. To test that further, we left it cryptomining and the GPU only hit 74°C – rivals can push 90°C.

Battery life varied considerably depending on cooling profile but it still ran the PCMark test for two-and-a-quarter hours (albeit 25 per cent slower than when plugged in). It played our Full HD movie for four hours. Portability is fair at 2.5KG but there's a hefty power brick to lug around.

> "The balance of price, performance, and usability make it our favourite all-rounder notebook..."

Connectivity is good thanks to USB-C, USB-A, Gigabit Ethernet, HDMI, mini-DisplayPort, an SD-card reader and two audio jacks. An HD webcam sits above the screen. The speakers are particularly praiseworthy due to their loudness and full-bodied audio.

At $2,999 it represents great value. The balance of price, performance, and usability makes it our favourite all-rounder notebook on the market. *NICK ROSS* PC

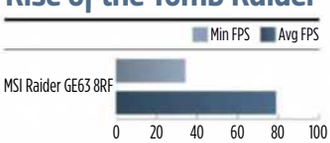
+
- Funky lights
- Great keyboard
- Effective cooling

–
- Screen is good not great

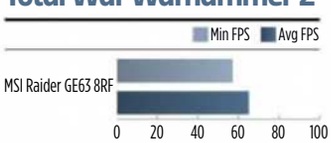
VERDICT:
Fast, looks-great, a joy to use and good value. What's not to love?

PC PowerPlay POWER AWARD **9**

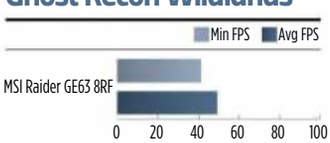
Rise of the Tomb Raider



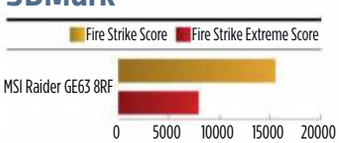
Total War Warhammer 2



Ghost Recon Wildlands



3DMark



LAPTOP

Razer Blade Stealth

Is this drool-worthy ultraportable part of a dream set-up for gamers?

PRICE $2400
www.razer.com

There are solid notebooks and then there are Razer notebooks. The Blade Stealth is another solid-chassis stunner from Razer, only this one is an ultraportable that weighs less-than 1.4KG. The matte-black finish looks incredibly classy (despite being a fingerprint magnet) while the hard-to-flex lid displays a sense of sophistication thanks to the cultured design.

Despite being an 13.3-inch notebook, it's available with a whopping 3,200 x 1,800 resolution, which you'll need to magnify with Windows unless you have the eyes of a hawk. It's very glossy but it's also a touchscreen. It gets impressively bright and colours pop.

Under the hood, is Intel's new Coffee Lake processor, the 1.8GHz quad-core, Core i7-8550U CPU. This is flanked by 16GB RAM and a speedy 256GB Samsung NvME SSD that conspire to make this one of the fastest ultraportables around. The only issue for gamers is the lack of discrete gaming graphics but Razer offers a solution via the Core v2. It's not cheap at $600, and you can read the full review on page 84. Nonetheless, we ran our usual gaming benchmarks with it and a desktop Nvidia GTX 1060 card to give you an idea of what to expect if you choose to use the Blade Stealth as an ultraportable during the day before transforming it into a behemoth gaming rig when you take it home at night. But performance will naturally depend on whatever card you install in it.

Battery life is getting increasingly-hard to test with modern, powerful notebooks dialing down performance when running on batteries. Nonetheless, there was relatively-little slowdown on the Stealth as it ran powerful tests for an impressive three-and-a-half hours. It also played our Full HD movie for six-and-a-quarter hours before expiring, which is very impressive. You'll be able to get through most of a working day without charging it.

The comfortable-to-use, scrabble-tile keyboard is full-sized, well-spaced and has low travel. It also glows in a variety of ways thanks to the Razer Synapse software, which lets you customise RGB patterns. The Synapse app will also log numbers of keystrokes, and provide heatmaps for different apps and games (if this is useful for you). Meanwhile the trackpad is large and responsive.

It generally runs very quietly and only gets slightly warm when under heavy use. The speakers get impressively loud and punchy and reproduce treble and bass with aplomb.

Charging is by the USB-C port. There are two other Type-A ports, a 3.5mm audio jack and a full-size HDMI port too. We're even impressed by the power cord which is long, wrapped in cord, and has only a very-small power brick.

> "You'll be able to get through most of a working day without charging the Blade Stealth."

At $2400 it's not cheap, but it's a seriously-impressive all-round ultraportable that excels at everything it does out of the box. Except gaming: you'll need to spend a great deal more on an enclosure and graphics card to make that work. Nonetheless, there's no denying that having a Stealth and Core v2 working in tandem is a dream computing set-up for any gamer. *NICK ROSS* PC

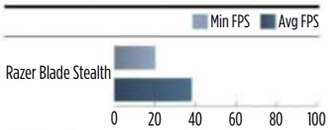
+
- Solid
- Good battery
- Powerful

-
- No integrated gaming graphics

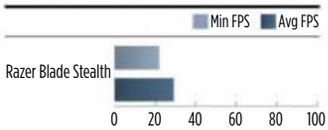
VERDICT:
A brilliant, all-round ultraportable which can even be transformed into a gaming rig if you've got deep pockets

9

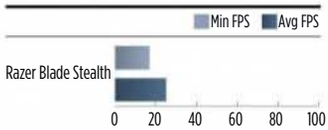
Rise of the Tomb Raider



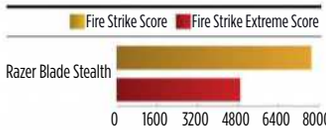
Total War Warhammer 2



Ghost Recon Wildlands

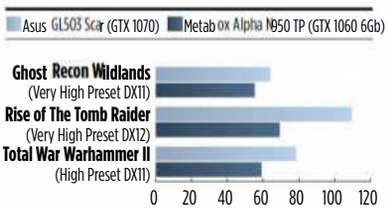


3DMark

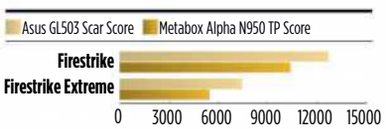


*NOTE – all scores generated using Razer Core v2 with GTX 1060

Game Benchmarks


Asus GL503 Scar (GTX 1070)
Metabox Alpha N950 TP (GTX 1060 6Gb)
Ghost Recon Wildlands
(Very High Preset DX11)
Rise of The Tomb Raider
(Very High Preset DX12)
Total War Warhammer II
(High Preset DX11)
0 20 40 60 80 100 120

3DMark



LAPTOP

Metabox Alpha N950TP

Aussie made gaming goodness

PRICE $1950
www.metabox.com.au

If you're in the market for a powerful gaming laptop, a lot of the time your attention will be drawn to one of the major manufacturers, who tend to offer a few non-customisable models for you to choose from. What if you want something a bit different though? Maybe you'd prefer a 1TB SSD instead of 256GB? Or how about a 4K screen? Enter Metabox. This Australia-based builder differentiates itself by offering customised models to suit the buyer's preference.

We received a Metabox N950TP, specifically tailored to our request for a representative mainstream model. The supplied model sits right in the sweet spot for a good performing gaming laptop, at under two grand. It comes with Intel's i5-8400 CPU, and no, that's not a cut down power-sipping mobile CPU, this is a *desktop* CPU. A full power six-core/six-thread CPU capable of boosting up to 4GHz. The included GPU is Nvidia's GTX 1060 6GB, joining 16Gb of RAM and a 512Gb SATA SSD. That's good particularly value for money.

The screen is a fairly standard 15.6in matte IPS screen. It's certainly not poor, but it's no 120Hz or G-Sync bezel-less beauty. It does its job though, with good colour reproduction and a wide viewing angle.

It weighs in at 2.5Kg, and with dimensions of 378mm (W) x 257mm (D) x 26.9mm (D) it's not a super slim lightweight, either. It's clear that Metabox is trying to keep the costs down. This means a bit of a chunky plastic shell, though to be honest, we can't really criticise this when the whole thing comes in well under two grand. Having said that, the build quality feels pretty good and it should have no problem being moved around regularly.

Getting back to that lovely CPU, you may think the N950TP might struggle to keep it cool, but we were pleased to see (and hear) no issues running it under load. The fans do ramp up of course, but they don't produce that annoying, high pitched whirring that many gaming laptops are forced to emit. The battery life is impressive for a gaming laptop, with a result of 3hr 36m measured with PCMark 8's battery test. While you won't be able to game all day on a single charge, it's good to know it can actually be used, you know, as an actual portable device.

The GTX 1060 puts out decent FPS levels in our demanding games. It's capable of pushing out enough frames to stay fluid at 60FPS with high settings (but not at maximum) and that's what users should be aiming for with a 60Hz screen. Bang on the sweet spot.

> While you won't be able to play all day on a single charge, it's good to know it can actually be used...

A machine like this comes chock full of I/O connectivity. There's four USB ports (1x 2.0 and 3x 3.1, one of which is a Type-C), there's a gigabit Ethernet jack, HDMI port, two Display ports and headphone and mic ports. And there's also AC Wi-Fi and BT on board.

Overall we are impressed by the N950TP. Its price is very competitive, and users get to customise their unit, which alone is a real strength of the Metabox lines. *CHRIS SZEWCZYK* PC

+
- It's got a desktop CPU!
- Good battery life
- Great value

–
- It's quite chunky

VERDICT:

If you want to game on a budget, and want to customize your laptop, give Metabox a look.

PC PowerPlay SMART BUY

8

CASE

Corsair Carbide Spec Omega PC case

Corsair's latest is big on features without missing the important details.

PRICE $139
www.corsair.com/ww/en/spec-omega-case

Ask me a few years ago who my favourite case maker was, and the answer would be an emphatic CORSAIR! It's true, I'd probably yell it and everything. Watching the company come to pretty much define what it meant to produce a truly enthusiast-grade case at approachable price-points was a real pleasure over the last ten years.

But then the market hit one of those points where everyone was doing good work, at pretty much the same time that building or rebuilding your PC went from being something you do every couple of years to a much less regular event. The market became very competitive, and the upgrade cycle slowed down.

Corsair kinda went off the boil.

But the latest Carbide cases are looking like a very solid proposition, and the Spec Omega in particular is a sleek, angular beauty. It's available in black, red, and white, and the red number currently gracing our test bench is really quite striking. The case eschews a glossy, finger-print prone finish in favour a lovely matte orange-red. Everything else is black, and the tempered glass side panel has a smoky finish, letting you see what's going on inside your PC, but not making a huge statement about it.

The front fascia is half red, half smoked black glass, with an LED strip separating the two. There's also a small, triangular air intake at the bottom, with a single red LED 120mm fan behind it. There's no filter on this intake, so you may need to keep an eye on dust build up, especially if your PC is sitting on the floor.

That said, four rubber-bottomed feet keep the case an inch clear of whatever surface it's sitting on, so there is that. And it makes for a pretty sturdy case overall.

The tempered glass side-panel is secured by four hex screws that you'll need an Allen key to remove, but one is provided. It makes for a nice low profile on the side-panel, and both the holes in the glass and the screws themselves are rubber dampened, so there's no chance of any vibrations being picked up during operation.

Behind the glass the interior is pretty business-like. A hard-drive caddy sits at the same height the PSU will, making for a clean space for the motherboard. There's lots of rubber-grommeted cable runs for a neat build, and behind the motherboard tray are three slots for SSDs.

The only other fan out of the box is a rear 120mm exhaust, but with modern builds cooling is less important than it used to be. If you do want to go hard, there's room for a 360mm radiator in the front panel, and plenty of room below the top panel. One minor complaint is the metal fan mounts at the front of the case are very thin metal, and bend very easily.

> **...** and the red number currently gracing our test bench is really quite striking.

But it's small beer compared to the case's other features and striking looks, and at only $139, it's a serious contender for my own next PC build.

Well played, Corsair. *DAVID HOLLINGWORTH* PC

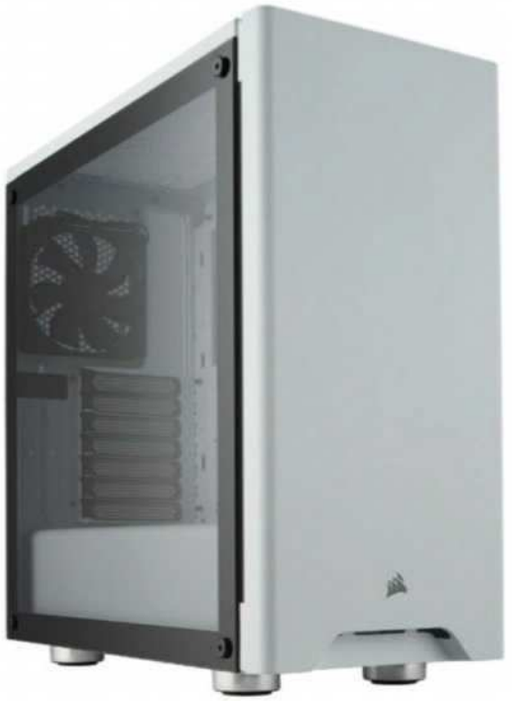
+
- Great design
- Clean interior
- Room for cooling options

-
- Some thin metal housings

VERDICT:

Lots of room and with some tasty features, the Spec Omega will please any PC builder.

9



CASE

Corsair Carbide 275R

Top case, this, for a quick and easy build that looks classy and impossible to fault

PRICE $119
www.corsair.com

You can find this for under $100 and if you're after a classically simple case with plenty of room inside and good ventilation it's a steal. The slab of tinted tempered glass consuming all of one side is a bonus-feeling treat that belies its bargain price, as does the large, shiny and rubber-padded feet that give it a faint air of Hi-Fi style.

Our review unit was white and looked very smart. The finish is almost but not-quite matte on the metal areas. The entire removable front panel is plastic and is of the design type that allows air in through the edges and bottom. A little light bleed comes through if you're using LED fans and sets it off well. The supplied fans, though, aren't LED. This is a bargain basement case, but one could also argue that too much bling ruins the elegant look of the Carbide 275R. It does do a nice little aesthetic and functional trick by blinking a white LED when it's in sleep mode.

The test build was effortless. No snags or hiccups were encountered. Once you remove the tempered glass side that's held in place with four hex bolts there's nothing in the way of your build. The PSU area is in its own separated cavity that makes for tidier cable management, and it frees up the rest of the space as there are no drive caddies to impede airflow. SATA drives are mounted directly on the surface of the back plate.

It ships with two 120mm fans, one in the front and rear. It can accommodate a total of six 120mm fans. I added another to the front, and fitted a 240mm radiator to the top, and it will take radiators up to 360mm. The screw holes for the top radiator are actually long slots, which makes it nice and easy to position the radiator exactly where it should be before tightening things up. The top vent grill is magnetic and removable. It looks a little odd, like it's just a sheet of perforated metal resting there, but the design saves money and build time, and makes cleaning the top area much easier. And, the entire top area is vented so whatever space is left over after you fit a radiator is still open for heat to rise out of. If you're not using a radiator then it's still a win with the maximum possible top area for hot air to vent through.

> "...the entire top is vented so whatever space is left over after you fit a radiator is still open for heat to rise out of."

It's a case for people perhaps considering something like a Fractal Design Nano, which it's priced squarely against. The only downside is that's it's more of a hassle than we're used to, to remove the glass side panel via its four bolts. It's not attached or hinged in any convenient way, but unless you expect to fiddle a lot it's no big issue.
BEN MANSILL PC

+
- Super simple design
- Looks classy
- Cheap!

-
- Side glass panel takes a minute to remove
- You'll need to add a fan or two

VERDICT:
A remarkably easy case to build into, thanks to a clear simplicity of design.

9

MONITOR

Asus ROG Strix XG32VQ gaming monitor

Asus' gaming monitor ticks many boxes, but should you buy it?

PRICE $859
www.asus.com/au

Many gamers like the idea of a large screen with a relatively-low resolution as it makes targets larger and headshots easier. But over-stretching a Full HD resolution introduces annoying pixelation effects to text, graphics and movies. The XG32VQ's combination of a 31.5-inch VA panel with a 2,560 x 1,440 resolution seems to have hit a sweet spot though.

Desktop text was comfortable for our middle-aged eyes to read (when at default magnification) and the image-enhancing gaming technologies have not obliterated its clarity which some competitors can do.

It's also a 144Hz panel and the smoothness in motion feels as good as we'd hoped. There's a slight curve (in technical terms it's rated 1800R) which adds an extra degree of comfort without significantly-distorting anything. Ultimately, it feels great when you're sitting in front of it no matter what task you're performing.

There are many settings which are accessible via a small joystick and four, large buttons – all are rear mounted. These include many presets for different types of games and multiple ways of adjusting each one. Saving four different set-ups is very easy and, unlike rivals, you don't have to wait tortuous seconds for changes to execute.

The VA panel has 300nits of brightness which we had to turn down when not gaming as it's very bright. Colour saturation is also impressive – playing Far Cry 5 on it made walking in the woods particularly pleasant.

There are a fair few gaming monitors which sacrifice usability in some areas in order to boost performance in others, but frankly, we can't find a weak spot with the XG32VQ. *NICK ROSS* PC

+	• Great at displaying everything • Size vs resolution sweet spot • Reasonably priced
-	• None

VERDICT:
Good value. Excels at everything. No weak points

PC PowerPlay SMART BUY

10

MONITOR

Asus ROG Strix XG35VQ gaming monitor

Does size matter or is it how you use it?

PRICE $1,049
www.asus.com/au

Having raved about the three-and-a-half-inch smaller XG32VQ monitor on this page, you'd be forgiven for thinking that it's big brother must be better.

The XG35VQ isn't just 35-inches wide, it has a higher, 3,440 x 1,440 resolution which gives it a 22:9 aspect ratio compared to the 2,560 x 1,440, 16:9 combination provided by the XG32VQ. Big deal you might say, but the core difference isn't the $190 price increase, it's the 100Hz refresh rate which is noticeably-slower than the smaller-sibling's 144Hz.

We'll start with connectivity in order to explain the issue. In place of a mini DisplayPort socket is a second HDMI port to complement the full-size DisplayPort (version 1.2). One HDMI port is version 1.4 while the other is version 2. When we attached the monitor to our GTX 1080-based rig using the lesser HDMI port, we couldn't achieve a refresh rate greater than 60Hz. And simply plugging it into the proper HDMI port didn't always fix things.

The trouble is that at 100Hz we still suffered from image tearing. One significant reason that these monitors are cheaper than competitors is that they don't carry Nvidia's certifications for G-Sync (which fixes tearing). They do support the (free) Freesync standard that AMD uses so this should be less of an issue if you're using an AMD card.

It's still a useable monitor but the VA panel is optimised for gaming and the curved screen isn't as uniformly-lit as desktop-application-optimised IPS panels. For the sake of 3.5in, the XG32VQ offers a saving of $190 and is much better all round. *NICK ROSS* PC

+	• Very large • Relatively low price
-	• 100Hz refresh feels slow • Image tearing when not using Freesync

VERDICT:
Bigger isn't better for gamers with this relatively-slow behemoth

6

MONITOR

Alienware AW3418DW 34in Curved Monitor

Everything you could ask for in a gaming monitor, with a price-tag to match.

PRICE $2099
alienware.com.au

Alienware is synonymous with pimped out gaming rigs and its latest big screen gaming monitor will fit right in to any pimped-out gaming rig you've got going. The Alienware AW3418DW is a 21:9 ultra-wide 34-inch display that's designed to be an immersive experience that sucks you right into whatever game you're playing.

The immersive feeling is delivered via a subtle 1900R curve that wraps around your noggin, filling your peripheral vision with nothing but the 3440x1440 pixels on offer. The chunky, angular stand is emblazoned with Alienware branding and is fully adjustable, so your gaming sessions are ergonomic, as well as immersive. Connectivity-wise it's all pretty standard on the AW3418DW. 1x DisplayPort 1.2, 1x HDMI 1.4, 4x USB 3.0 ports and a headphone output. The panel is also flicker-free and low-blue light for those with sensitive eyes.

Being a gaming monitor, refresh rates are important and the AW3418DW delivers with 120Hz. That might not sound like a lot in the age of 200Hz displays but let me remind you that it is a 34-inch curved display that has a resolution of 3440x1440. It isn't easy to get 120fps at 3440x1440, but if you have the GPU grunt to do so, first person shooters look absolutely amazing and play so smoothly. Once you've experienced high frame rate gaming on a big curved display, it's hard to go back to a tiny 24-inch 60Hz monitor.

To make sure that your gaming experience is smooth at 120Hz, Alienware has chucked in Nvidia G-Sync support too. If you're unfamiliar with G-Sync, it's a way for your Nvidia graphics card to talk to the monitor and make sure the frame rate the GPU spits out and the monitor's refresh rate are in sync. This avoids the annoying tearing and jagged edges you often see when a monitor and frame rate aren't getting along.

Colour accuracy is surprisingly good, with 99% sRGB coverage thanks to the IPS panel. But due to that IPS panel, response times are "only" 4ms GtG. Competitive gamers might find that a little slow, but for 99% of people, the improved colour accuracy an IPS panel brings is more of a benefit than a few extra milliseconds of latency.

Colours are vibrant and rich, but you aren't going to be able to edit digital photos to print level accuracy here. Speaking of colours, the AW3418DW is covered in LEDs that can be hooked up to Alienware's AlienFX software. Up to 145 games are supported by AlienFX to create dynamic lightning effects that can be tied directly to game action. When not gaming, they just look cool.

> "Colour accuracy is surprisingly good, with 99% sRGB coverage thanks to the IPS panel."

Sure, the Alienware AW3418DW is expensive at $2099, but once again let me remind you that for your two grand you get a 34-inch, 3440x1440 curved display that can do 120Hz and supports Nvidia G-Sync. That sort of performance doesn't come cheap, particularly since you also need an expensive GPU to go with it. But if you've got the cash, it's a thing of beauty. *ANTHONY AGIUS* PC

+
- Nvidia G-Sync support
- 3440x1440 res & 120Hz refresh
- 99% sRGB colour gamut

-
- Expensive
- Latency not best in class
- Very expensive

VERDICT:

A very expensive investment, but it's a monitor that will deliver for years to come.

9

MONITOR

LG 32GK850G-B 31.5-inch QHD G-Sync Monitor

Perfect if you need a large, high resolution monitor with support for Nvida G-Sync.

PRICE $1299
lg.com/au

Gamers have never had it better, with a plethora of devices and accessories currently on the market to help them indulge in their passion. Monitors of course, are not immune from the gaming product sphere, with most manufacturers producing a range of displays made with the gamer in mind. LG's latest monitor is a gamer's delight, fitted out with all the specs any demanding gamer will love.

The 32GK850G-B is a 31.5-inch, 2560x1440 display with a VA-type panel. A VA-type panel is the best choice for most gamers, as it retains a level of colour rendition superior to that of the cheaper TN type panels, but allows for faster refresh rates than IPS panels, which are normally used for colour accurate applications. LG's use of a VA panel allows for a whopping 144Hz refresh rate, perfect for competitive FPS gaming - or for the fussy enthusiast.

To harness the full capability of a 144Hz refresh rate, the LG 32GK850G-B supports Nvidia's G-Sync technology. If you're unaware, G-Sync allows compatible video cards (Kepler, Maxwell, Pascal & Volta based GPUs) by adapting the frame-rate of the monitor to suit the GPU output. This prevents screen tearing - that annoying pixilation looking glitches or stuttering you sometimes see in 3D games when there's a lot of fast action on the screen.

Not everyone is a fan of G-Sync, as it's expensive for monitor manufacturers to implement compared to the free Adaptive Sync feature of DisplayPort 1.2a, which is used by AMD. But, if you have an Nvidia GPU, you have no choice, so G-Sync it is. It works superbly on the LG 32GK850G-B, making for a silky-smooth experience. Even if your PC can't go all the way to 144fps, even at lower rates, G-Sync will kick in and prevent unsightly tearing.

Other features gamers will love include the ability to place a crosshair overlay in the middle of the display to ensure precise shooting in FPS games, and Black Stabilizer, which highlights dark areas, so you can see enemies hiding in the shadows. There's also the ability to overclock the refresh rate to 165Hz, if you're in to that sort of thing.

If bling is your thing, the LG 32GK850G-B has you covered here too, with a giant LED ring at the rear of the display that can light up the wall and surrounding area in a set of pre-defined colours. In the dark, it looks fantastic. Unfortunately, there's no way to get the LEDs to sync with platforms like Gigabyte's Aorus or Asus Strix, and there's no software from LG to control the lights from your PC.

> "There's also the ability to overclock the refresh rate to 165Hz, if you're in to that sort of thing."

Nvidia gamers that want a 2560x1440 monitor that's bigger than 27-inch, has a high refresh rate and G-Sync don't have much choice. This translates to poor value for money compared to similar monitors with AMD's FreeSync technology. Luckily, the LG 32GK850G-B is a top class monitor with excellent build quality, wicked fast refresh rates that'll satisfy anyone after a big and fast display with G-Sync support. *ANTHONY AGIUS* PC

+
- Nvidia G-Sync support
- Excellent refresh rate
- High end build quality

-
- Expensive
- No LED sync software

VERDICT:

If you're hankering for one of the bigger G-Sync monitors you can buy, this is it.

8

CONTROLLER

Logitech X-56

A dominating controller for a gaming niche.

PRICE $399
www.logitechg.com/au

Following Logitech's 2016 acquisition of Saitek, the somewhat legendary X-series HOTAS controllers have been evolved and refined. The basic design still carries elements going back to the ancient X-52, but has been beefed up with hints of Thrustmaster's *very serious* Warthog HOTAS product. Notably, the industrial-vibed metal switch surrounds, and a move towards more toggle switches, as well as rotary controllers than plain old buttons.

While the toggle switches offer good in-game mapping application, rotary controllers are more difficult to find a use for, and there are many of them. Together with the standard stick and throttle axes, the rotaries bring the total number of axes to 13. For classic flight sims, buttons or switches are a better use of the space, but the emergence of Star Citizen and its clones change the story, allowing mapping of actual 3D movement via the rotaries, as well as, potentially, things like active management of ship power systems. This could help the old-school HOTAS arrangement appeal more. As it stands in Star Citizen the preferred setup is two joysticks – with a full dedicated throttle largely a waste of space, so this could change that.

Via the excellent software you can map a crazy number of commands and schemes, 189 Logitech claims, though I barely needed a fraction of that. Quick scheme switching is done by the same three-way selector on the throttle Saitek used, and it's extremely handy to have.

Logitech has been open about addressing quality control issues as well as design flaws in old Saitek gear and the new X-56 evolves not only functionality, but in feel. All hands-on surfaces are covered with that nice soft rubber plastic stuff, though past experience with this material, for me at least, is that it wears through and rubs off after a few years use. Time will tell.

The throttle movement is significantly stiffer and, disappointingly, the knob for adjusting its friction did almost nothing. It does feel great to use, but the stiffness means you will need to mount it to your desk somehow or it will be moving around. A hole in each corner facilitates bolting it down.

Saitek joysticks have always had very loose, almost floppy movement. And it can be that way, if you like, or not. The same basic Saitek spring around the base system is still here but you get a set of four swappable springs, now. Even at its stiffest it's still a wobbler compared to the superstiff Thrustmaster Warthog, but that lends itself well to space sims;

> "The same basic Saitek spring around the base system is still here but you get a set of four swappable springs..."

unless you seek ultimate realism it is rather nice to use.

Considering the price is almost the same as a 1990s-era Saitek X-52 was at the time, it's a fantastic proposition. It looks serious and mean, though still with the many cool little style flourishes that mark this series. For a do-it-all HOTAS system (sans pedals, with rudder here via standard stick-twist), it can't be beat and the new found Logitech quality adds a compelling reason to upgrade. *BEN MANSILL* PC

+
- An ergonomic feast of controls
- Feels like quality
- Looks sexy AF

-
- Stick still a bit loose
- Rotary controls could potentially go unused

VERDICT:

It looks fab and feels terrific and Logitech's improvements make it a worthy buy or upgrade.

PC PowerPlay POWER AWARD **9**

HEADPHONES

Sennheiser GSP 600 Professional Gaming Headset

Serious looks, serious sounds

PRICE $359
en-au.sennheiser.com

It's very rare - being as I am a jaded, middle-aged gamer – for me take a product out of the box and just go "Wow!" But I did just that with Sennheiser's newest headset, the GSP 600. To say it looks like kinda cool is an understatement – it manages to combine a chunky and aggressive aesthetic with some really neat design flourishes. They look, and even feel, like they could stop a bullet.

Putting them on I noticed right away was that they do in fact stop a lot of sound. The covered-back enclosures of each ear cup do a good job of blocking out ambient, noise and the suede-like finish on the contact surface of the padding is grippy without being sticky – important for Australian gamers who spend half the year sweating. Getting the GSP 600 to fit your head properly is a simple matter of playing around with the sliders, and then they sit firmly on your skull, staying in place at all costs. And the solid construction means there's no odd noises being generated by the headphones tapping on anything (we're looking at you, Razer Elektra V2!), though the cloth-braided cable does produce a burr as it rubs on your shoulder that a plain plastic-sleeved cable wouldn't.

Being a gaming headset, the GSP-600 does have a focus on the lower end of the scale. Bass rumbles along nicely, making explosions and other deeper noises sound particularly rich, and listening to your favourite rockin' music is similarly boosted by the bias toward bass. But in more expansive soundstages, you can notice the upper and middle ranges lack a little in punch and clarity, and music with more nuance suffers similarly.

It's a shame, because if there's one area the GS-600 really excels it's in its positional audio. Sounds coming from any direction are clearly and precisely located in space, allowing you to pinpoint cues with uncanny ease. PlayerUnknown's Battlegrounds is a great benchmark for this kind of audio, and I felt actually better at the game because of these headphones.

A boom mic rounds out the package, and this too is a little mixed – it mutes input based on being up or down, which works well, but it's hard to fix in just the right spot. It is very flexible, almost to a fault. Finally, there's a volume wheel on the right-hand earcup, and this is wonderfully stiff by comparison, helping you accurately dial in the right sound levels for whatever you're doing.

I still really like Sennheiser's latest effort, but not quite as much as that first unboxing. By calling it a 'Professional Gaming Headset', you can see what its designers must have been thinking – boost the BIG GAMING SOUNDS, and make those sounds easy to place in a game's landscape. But at what the GSP-600 costs, you might want just a little more versatility.

> "... it manages to combine a chunky and aggressive aesthetic with some really neat design flourishes."

And yeah, I also still can't stop fondling them. *DAVID HOLLINGWORTH* PC

+
- Massively solid
- Firm and comfortable
- Great bass and positional audio

-
- Slightly weak on anything other than bass

VERDICT:

For a gaming headset worth nearly $400, we expect a little bit more from Sennheiser.

7

HEADPHONES

Razer Elektra V2 headphones

The price is right – but what about the sound?

PRICE $99
www.razerzone.com

Razer's second iteration (extremely Doctor Nick voice: The V is for VERSION!) of its Elektra headphones are a pretty good effort at producing a budget set of gaming cans. They look the part, without being over the top, have some very useful features, and they even sound... okay. I mean, we're not talking high-end audio, here, so it seems churlish to get too critical with how these headphones sound, but how does the virtual 7.1 stack up?

It's... not great 7.1 sound, virtual or otherwise. Truth is, getting 7.1 right can be hard for headphones that cost a lot more and have real hardware. For 100 bucks, you're not going to come close, and in fact the sound field in a game like PlayerUnknown's Battlegrounds is distinctly muddy. Distant noises are tolerably precise, but not in a way that you wouldn't get from stereo, while sounds that are on top of you just sound close, not like they're coming from any particular direction. Sound quality is, again, okay, but you get what you pay for. It's tuned for gaming and music, and while music is passable, games definitely feel like they're taking a hit.

And to help you feel okay if you really can only afford a single set of headphones, the mic is removable, which is a plus. There are two cables, too – one with a splitter for setting up your headphone and mic combo at your PC (or console, we don't judge), and shorter length for taking on the road when you'll be ditching the mic.

But that's where the pros end.

The Elektra V2s are light and comfortable (the one-size fits all headband is pretty versatile, but folks with particularly large or small noggins may find it uncomfortable), but they're in fact so light that even the slightest sound is amplified by the plastic housing of each earcup. Bump the mic, and it sounds like a dull roar in year ears, and the sound of the cable rubbing against the collar of my shirt was audible even over grenade blasts. Another poor design decision is the placement of the volume control, which is a very short slider on the back of the left ear-cup. It has such a short travel length that any sense of precise sound adjustment is pretty much lost – in the middle of a game adjusting it is a case of frantically choosing between ALL THE SOUND, or none at all. It's simply distracting to use.

> "And to help you feel okay if you really can only afford a single set of headphones, the mic is removable - a plus."

The Elektra V2 really is a mixed bag – there are some features that feel really premium for the price point, but the light construction does them no favours, and the average sound quality still doesn't seem good enough for the price.

You can do better. *DAVID HOLLINGWORTH* PC

+
- Sits lightly but tightly on your head
- Not too painful to the wallet
- Versatile

-
- They just don't sound great
- Very echo-ey build quality

VERDICT:

Even for the price these headphones are just not fit for purpose.

6

KEYBOARD

Logitech G512 Carbon

Treat your desk and fingers to something special.

PRICE $179.95
Logitech.com

This lovely lump of keyboard is as classy as heck, looking quite different to the usual over-styled designs we see. It's an evolution of Logitech's wonderful 'austere slab' (my term) design it introduced last year, but with a sheet of brushed aluminium across its surface.

And that's half of what it has going for it. The other half is Logitech's Romer-G switches which I've really grown to like. In a world of almost nothing but Cherry switches, and some Razers, these offer a genuine premium alternative. There's Linear, which are Cherry Brown-like with a smooth unimpeded throw and medium rebound, or Tactile which are Cherry Redalikes with a slight actuation point you can feel mid-press. Frankly I like the Romer-G's better than Cherrys. They are quieter and less clattery and just feel more premium.

Speaking of premium, the 512 Carbon reeks of it, it really is impressive to behold and use and it's got some weight to it, too. The aluminium's edge is quite sharp and you could almost cut yourself on it. It's actually a little annoying at first if you tend to rest fingers on the edge, but I got over it. The dark grey anodized colour looks super slick, especially with the key lighting set to blue.

For $50 less you can grab the virtually identical Logitech G413 if the sexy aluminium doesn't impress you. *BEN MANSILL* PC

+	• Premium without the BS • Nice switches • Reasonable value
-	• Sharp and cold

VERDICT:
A step up from the fantastic G413 with premium materials.

9

KEYBOARD

HyperX Alloy Elite RGB gaming keyboard

Pricey, but a tops effort.

PRICE $269
www.hyperxgaming.com/en

Out of the box, the Alloy Elite RGB may not immediately justify the $269 price tag, but it's certainly an impressive bit of kit nonetheless.

More irritating however, is the labelling on each key; the Alloy Elite RGB has all the special characters beside the main letter of each key, rather than underneath, and that's something I find can really throw me when I'm hunting-and-pecking for a key, rather than touch-typing.

The Alloy Elite RGB is sturdy under gaming conditions, and the combination of weight and rubber feet means it's staying in place no matter how much hammering it gets in the heat of battle. The volume roller feels lovely when you're trying to up the sound on a game or a vid, and there's multimedia keys as well. The keys themselves are Cherry MX Brown mechanical switches, and while they're not my preferred Cherry keys (Cherry MX Blue are the best and that's a hill I am perfectly willing to die on), they get the job done.

And the lighting is wonderfully versatile, if a pulsing, shimmering lightshow is what you want from your keyboard. The Alloy Elite RGB is sturdy under gaming conditions, and the combination of weight and rubber feet means it's staying in place no matter how much hammering it gets in the heat of battle.

But I still can't quite behind a keyboard this expensive, even with all the bells and whistles. *DAVID HOLLINGWORTH* PC

+	• Solid as a brick • Fantastic design • Great to game on
-	• Worth $269? Not sure...

VERDICT:
A great flagship-grade keyboard that stands up with the best of them, but most gamers can get along with something for much less.

8

GPU ENCLOSURE

Razer Core v2

Can Razer's graphics card enclosure really turn lowly laptops into gargantuan gaming rigs?

PRICE $600
www.razer.com

Want to turn an ultraportable laptop into a full-powered gaming rig? Then check out Razer's Core v2. This graphics-card-enclosure-cum-docking station is super solid, consisting of two, well-ventilated slabs of metal which slide apart to allow for the easy insertion of a full-sized, desktop graphics card. Even the longer, wider varieties like the Nvidia GTX 1080 Ti are compatible. The interior compartment, which holds the electronics, is unlocked with a gratuitously-large lever that gives everything a sense of blacksmith-hewn solidity. All connections are tool-less and plugging in a card is intuitive.

A kettle lead provides power to a built-in 500W PSU but almost everything else passes through the ThunderBolt 3 cable (note that the bundled one is very short). It will work with any device that is ThunderBolt 3 compatible AND supports the associated external graphics standard, plus has had all relevant firmware and BIOSes updated. The graphics drivers come with existing AMD-and-Nvidia packages, while plugging it in will activate a laptop's Thunderbolt-recognition system, which you only need to enable once. We tested with Razer's own laptops and everything just worked when we plugged the cable in. Impressive. The connection also transmits up to 65W of power, so it can simultaneously charge your laptop.

But what of performance? Razer recommends using an external monitor for optimal performance as looping back to your laptop's own screen generates lag. The results are interesting. A Razer Blade Pro laptop with integrated GTX 1060 graphics scored 5,124 (24fps) in a Full HD Fire Strike Extreme 3DMark test. The same test using a Razer Blade Stealth Ultraportable plus Core v2 (with a desktop GTX 1060 card) on an external monitor was just one per cent slower. In a straight Fire Strike test, the Blade Pro laptop scored 9,656 (50fps). This dropped to 45fps using the Core v2 and Stealth on an external monitor and 43fps when using the Stealth's own display. Ultimately, while there can sometimes be slight drop in framerate, gaining the ability to play the latest games on an ultraportable is transformative.

We also mined cryptocurrency,which punishes GPUs and makes gaming laptops (plus, in some cases, desktops) overheat and slow down. Here the open housing of the Core v2 meant that mining performance was maximised thanks to the well-ventilated sides! However, the many air-vents mean that dust is an issue and there's no muffling of your graphics card's fan.

> "... gaining the ability to play the latest games on an ultraportable is transformative."

Other features include a four-port USB 3 hub and Gigabit Ethernet – so it can act as a straight docking station. It is lit up with Razer's RGB system which can be controlled and customised with its Synapse software.

Weighing 5.5KG, the Core v2 isn't particularly-portable and you should cover it up when not in use to avoid dust. Nonetheless, we loved how it transformed an ultraportable into a gaming rig so if you can afford the whopping $600 price tag it's a great buy.
NICK ROSS PC

+
- Transforms David into Goliath
- Simple to use

-
- Expensive
- Bulky
- Noisy

VERDICT:
Big and expensive but genuinely turns feeble laptops into high-end gaming rigs.

7

KEYBOARD

Asus ROG Strix Flare mechanical keyboard

A massive flagship of a keyboard, packed with features.

PRICE $249
www.asus.com/au

A lot of companies have expanded their business into making keyboards and mice over the last decade, and it's been interesting watching PC hardware manufacturers like Asus and Gigabyte get into the act. It's not been a smooth process, by any means, every now and then one of them makes a massive leap ahead in quality.

The new ROG Strix Flare is just such a stride forward, an impressively solid and weighty piece of kit that demands respect as soon as you put it in place in front of your monitor. It eschews the over-wrought design of many gaming products in favour a more elegant, monolithic aesthetic. There's also a single triangular notch on the top right edge, and this holds a neat little trick – the Strix Flare comes with a couple clear plastic inserts to stick in here, one with the ROG logo and one you can customize yourself, which the keyboard's RGB lighting cleverly illuminates. It's designed for eSports logos or more personal customisation, and we're not gonna lie – it's cooler than we were expecting. Asus included a custom logo for one of our publications and it really does make me smile.

It's the keys that make the keyboard, though, and the Strix Flare uses tried and trusted Cherry MX switches in either red, brown, blue, or black varieties. We've a red version to review, and though it's not to our usual taste, some of us still feel that you cannot beat Cherry switches. Of course, your mileage may vary, but typing and gaming on the Strix Flare is mostly a pleasure. The keys are responsive, accurate, and well-spaced, while 100 per cent anti-ghosting means you never miss a keystroke in a flurry of activity or World of Warcraft style face-rolling.

The one annoying thing about the keyboard though is linked to its RGB lighting. This ties into Asus' Aura Sync software, so can be synced up with the rest of your PC's lighting, or controlled via macros to produce a range of... let's just politely call them scintillating effects. I turned it off, but if you like breathing, pulsing, or dripping lighting, you're in luck. It's also very bright, thanks to a reflective white plate under the keys – in a dimly-lit room the keyboard is a veritble font of illumination. However, there's also something under the keys that causes a slight ringing echo with each key-stroke, and because of the greater size of the openings around each block of keys, you can really hear it. Some may not notice, some may not care, but it makes the keyboard sound just a little... tacky.

> "...one of the cleverest features is a groove on the underside of the keyboard to route your headphone cable."

On board macros and memory round out the package, as well as a detachable wrist rest, and one of the cleverest features is a groove on the underside of the keyboard to route your headphone cable right under your keyboard. But these features don't quite add up to Asus' asking price – there are keyboards out there with more features for less. *DAVID HOLLINGWORTH* PC

+
- Fantastic yet simple design
- Some truly unique features
- Great to game and type on

-
- Ring... ring... ring...
- Too expensive

VERDICT:

Just a touch too expansive for what's on offer, but otherwise one of Asus' best keyboards to date.

7

MOUSE & PAD

Razer Mamba & Firefly Hyperflux

A very slick and clever mouse and pad combo - but at a price...

PRICE $399
www.razerzone.com

I can't remember the last time I was excited about a mouse pad. And I'm pretty sure I've been less than excited about mice ever since Corsair pretty much put a lock on my mousing time with its first few forays into the market. Am I jaded? Possibly.

But that just makes my excitement for Razer's latest effort that much more surprising.

The product name is one of those 'does what it says on the tin' jobbies - it's a box with a Mamba mouse and Firefly mousepad in it. They both come with RGB goodness because that's essential in every gaming product these days, and they're just as comfy as you'd expect. But there's a new trick in Razer's sleeve, and that's its Hyperflux tech.

It's basically a wireless power solution. You plug in the mouse pad, but not the mouse, and the Hyperflux tech in the pad and mouse power your rodent to do its thing. What this means is not only do you do away with cables, but it also keeps the mouse nice and light, as it doesn't need a large onboard battery to hold charge.

In use the Mamba feels light and agile, capable of precise motions in both day-to-day functions and more high-stress clutch moments in your favourite games. And lacking a cord, it's just... more elegant. The Firefly mouse pad is good and large, with a strip of lighting around it that you'll either love or hate, and you can flip the surface pad to either a silky smooth cloth for really smooth mouse operation, or to a rougher plastic texture for those who prefer more feedback in their mousing.

And setup is super easy, as the software to download runs automatically when you plug your new gear in.

It all just works, and really does work well. But it does so at a cost. If you bought a normal Mamba mouse or Firefly mousepad it'll cost a shade under $200. Getting the pair with Hyperflux technology may give you bragging rights and a little less clutter on your desk, but it will also set you back $399, which is a lot of cash no matter how good the outcome is. Sure, it's nice to have a wireless mouse that doesn't need to mess around charging docks and so on, but I'm just not sure it justifies that much out of pocket expense.

Which is a shame, because it really is a great bit of gaming gear. *DAVID HOLLINGWORTH* PC

> "...setup is super easy, as the software to download runs automatically when you plug your new gear in."

+
- Amazingly light
- Really cool tech
- Plays great

-
- Ouch, my wallet

VERDICT:

Fantastic to use and tech that just works. But at a price that makes it very hard to justify.

PC PowerPlay POWER AWARD **8**

MOUSE

HyperX Pulsefire Surge

Irresistible coolness.

PRICE $109
Hyperxgaming.com

More than a few RGB mice have passed under our palms but this is hands-down the nicest looking. It carefully straddles totally over the top with relative subtlety, creating a sharp line of illumination that looks gorgeous. You can of course go gaudy and have rainbow cycling, but I think it looks grand enough with a static colour. It'll do cycling and static red with no software, or pretty much whatever you want with the NGenuity app installed.

It feels only average out of the box, somewhat light and with a hard shell, but I was hooked the moment I started using it. I think this is my new favorite mouse. The lightness means easy speed of movement and the comfort is bang on perfect, with it arched just enough for palm-resters but with room for claw grippers to feel right at home.

Generous Teflon acreage makes it super smooth and the buttons have just the right amount of click resistance so as not to slow you down, but still register the right feel.

DPI runs up 16,000 which is definitely at the high end. You can use the app to show a set colour for each DPI setting, too, which is potentially handy. The only negative may be a big one, though, as there's just a single button for DPI adjustments so you may need to cycle through the whole set of five DPI settings if you want to get to the setting you want, and can't quickly move between, say, your favorite two settings. *BEN MANSILL* PC

+	• Looks Tronny • Handles perfectly
-	•Only one DPI button

VERDICT:
Smooth in operation, with solid options, and a great feel in the hand.

8

PAD

Razer Goliathus Chroma

A ring of fire.

PRICE $59.95
Razer.com/au-en

We wonder why there aren't more mouse pad product releases to match the Cambrian explosion of mice, of late. Razer has something new, so let's look at it, then. It's an updated version of the Goliathus that now includes an RGB edging. It'll do all the usual RGB tricks – breathing, spectrum cycling and reactive, as well as your own custom efforts.

When used in conjunction with the essential Razer Synapse software other compatible Razer devices can sync up and RGB in unison. I don't mind installing software to control a mouse pad's lighting, but you also need to do a full account creation and registration which is a bit of an affront to what should be a less fiddlesome process. Razer – you don't need to data capture your users' contact info, please, just do simple software that does the basic stuff.

But to the pad. It's a soft and flexible cloth and felt terrific with the new HyperX Pulsefire I'm also reviewing. I did use it for a while with a very old mouse with worn Teflon and it occurred to me that these old worn mice are terrible on hard pads, but still nicely glidey on this soft one. So there's something to consider if your rodent is getting on.

The lighting is super bright, even on the absolute minimum setting but I must say does look superb on a desk, particularly with a colour-matched mouse. There's also the super enormous Extended version almost a meter long at $109.95. *BEN MANSILL* PC

+	• Glides well, stays put • Looks like Tron at night
-	• Hard pads are easier to clean • Need to register an account

VERDICT:
Jumping through set-up hoops to use a mouse pad may be peak 2018, but it's still very good.

8

SMALL IS BEAUTIFUL: THE RISE OF THE POCKET GAMING PC

Intel's ongoing obsession with low-powered CPUs and on-die graphics has led to the creation of the first true mobile gaming PCs. Here's how.

Oh look, it's a new column regular article thing. Constant readers will be familiar with my somewhat self-indulgent and subjective takes on various classic PC games from those times I wear my I-really-should-get-this-thing-dry-cleaned-one-day Hagionaut costume. And now I get to do it for hardware as well, in a new thing I call Objects in Space. Yes it's a Firefly reference.

And to kick this column off I must make a confession. Even more-constant readers will know that I used to edit this fine magazine, and that for a time I was all about PC gaming, to the exclusion of all other platforms. Hell, I had to be. In fact I never owned a console until the Nintendo GameCube.

But I had a secret vice. Even as I insisted in these pages, over and over, that PC offered the best possible experience for the true gamer, I hid a secret shame.

Handheld gaming.

That was my secret. The whole time I was editor of PC PowerPlay, I lusted after handheld systems. Systems including... well, by the time I had money to indulge this perversion, all you could get was the Gameboy Advance. But since then I've worked my way through the pantheon of great handhelds. GBA, Nintendo DS Lite, then PSP, then PS Vita, then Nintendo 3DS XL, and most recently the Nintendo Switch.

As much as it shames me, I played Terraria to endgame not on PC, but on the PS Vita. I mastered Binding of Isaac on PS Vita. I finished Cat Quest on the Switch. I've only ever played Stardew Valley and Oxenfree on the Switch.

Don't look at me!

> "... what I've always wanted is a handheld system that lets me curl up on the couch and play PC games."

Yes, I know these handhelds are hopelessly - even deliberately - underpowered. I know playing Skyrim on the Switch is, like, just weird. But these handhelds give me something, the only thing, the PC can't: the ability to curl up with a game in the same way I curl up with a book.

You have to see it from my perspective. I may not be a journalist in the strictest sense, but I sure as hell am a professional writer. I spend my days in front of the PC, typing on the PC, doing PC-things. The bulk of my communication is done through the PC.

So after eight hours (or more, on deadline) in front of the machine, the last thing I want to do is flick over to Steam and boot up a game that demands 100 hours of my time just to get to the good stuff.

But I still want to play games. And handheld systems help me scratch that itch. And yet, and yet... as a PC evangelist I know. I see. It's just not the same. The games lack a certain something, a certain... depth isn't the right word, because especially since the 3DS, the PS Vita, and the Switch, handheld games have become plenty deep. But... look, you know the difference right? That's why you're a PC gamer.

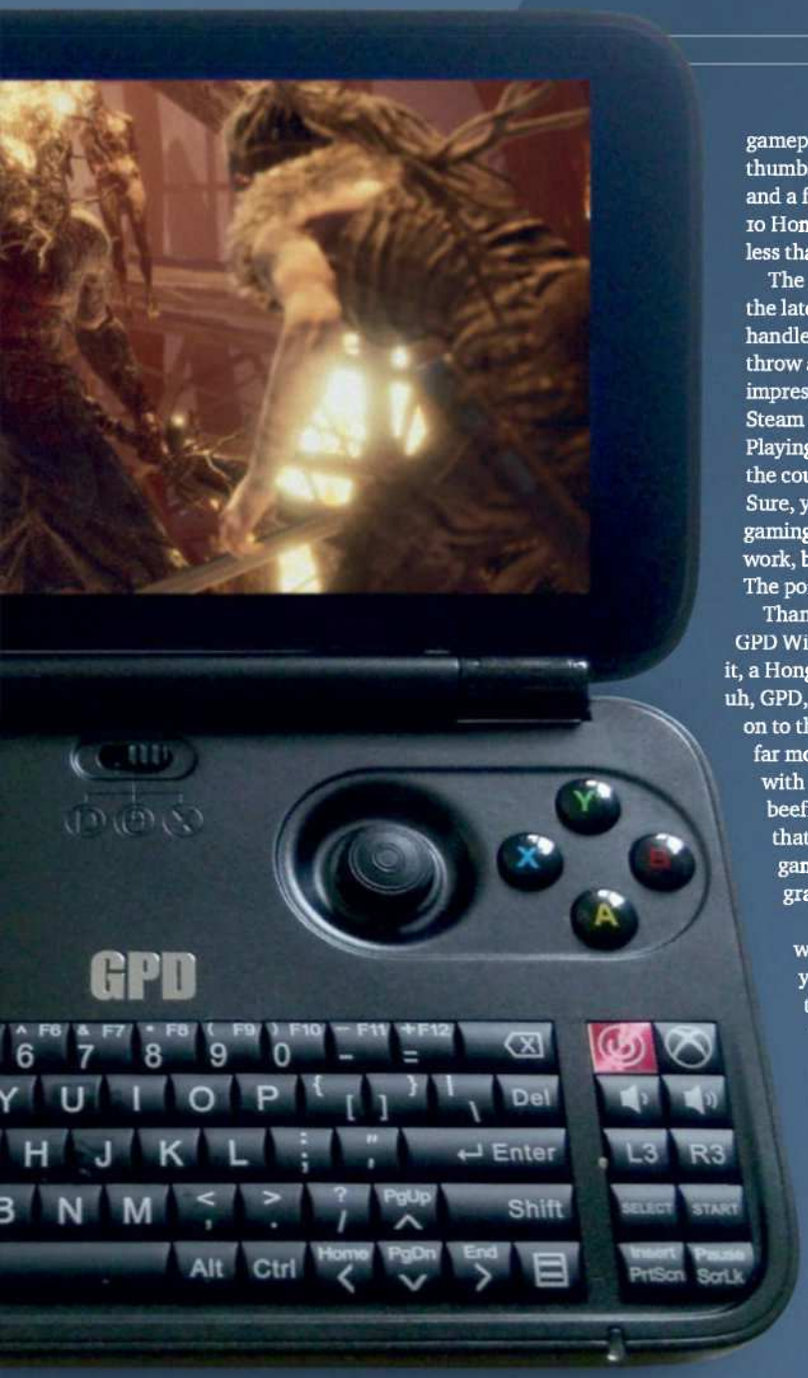
So what I've always wanted is a handheld system that lets me curl up on the couch but also play PC games. And now, thanks largely to Intel's push for ultra-compact form factors, handheld gaming PCs are at last starting to be a thing.

To long-time followers and fans of the open-source emulation scene, the initials "GP" have a certain legacy. The GP32 (which I own, and I'm pretty sure I even know what drawer it's in) was an ARM-powered Linux-based handheld emulator that could more-or-less handle most of the games from the 8-bit age. To be honest it was a pile of plastic junk with a low-res 4:3 display, but it was a proof of concept, yeah?

After the GP32, various other at first Linux and then Android based systems came and went. It was all very niche, very

▲(Main pic) The GPD Win may work for gaming, but no one's typing their life's work on one.

(above) And the Win 2 ain't much better. But it is better for gaming. So...



underground. Not least because all these systems relied on illegal ROMs to even work.

Eventually, in 2016, a Hong Kong outfit crowdfunded a device it called the GPD Win. This was a machine that took Intel's Atom CPU platform, a 5.5-inch 720p display from a mobile phone, a pair of thumbsticks, some buttons and a tiny keyboard, and mashed it all into a case the size of a slightly fatter 3DS XL.

Make no mistake: as a hardcore gaming machine, the GPD Win does not have the chops to make it. But it's an incredible version 1.0 device.

It has 4GB of RAM, an Intel Atom x7-Z8750 CPU, Intel HD 405 graphics, a 5.5-inch 720p display, a whole bunch of ports including USB-C with video, a hardware keyboard, gamepad buttons and two thumbsticks, 64GB of storage, and a free version of Windows 10 Home because the screen is less than nine inches.

The GPD Win can't handle the latest games. But it can handle every retro title you throw at it. And even more impressively, it's a fantastic Steam home streaming device. Playing Hellblade on this, on the couch, is like witchcraft. Sure, you need a $2000+ gaming PC as well to make it work, but that's not the point. The point here is potential.

Thanks to the success of the GPD Win, the company behind it, a Hong Kong outfit called, uh, GPD, has of course moved on to the GPD Win 2. This is a far more impressive device, with a Core M3 CPU and beefier integrated graphics that can handle most AAA games (albeit at 720p with graphics set to low).

My pre-order is in, and I will 100 per cent be giving you a detailed review of this feisty little machine when it arrives in a couple of months.

Yet as exciting as the GPD Win 2 is, I'm really looking forward to future explorations in this admittedly still rather niche space.

As we were writing this issue, Intel finally confirmed its long-anticipated (and somewhat bizarre) collaboration with AMD to integrate Radeon RX Vega GPUs into its eighth-generation CPUs. Oh yeah.

The GPD Win 2 will be a good little machine that plays PC games with the detail turned down. But the generation after that should be absolutely mind-blowing. A powerful CPU with a dedicated GPU on-die, designed to handle 4K and VR? That thing will be blisteringly fast in a handheld context.

For at least ten years I've wanted a true, uncut, unrestricted PC experience in a handheld format. And thanks to Intel, a bunch of crazy guys with a dream in Hong Kong, and the miracle of crowdfunding, my dream may at last be coming true.

And my secret shame need be a shame no more. *ANTHONY FORDHAM* PC

THE TRAGEDY OF PANDORA

One of the most impressive things about the GPD Win is how its creators harnessed crowdfunding to get the damn thing made so quickly. This was very important, because tech changes so fast; if you dither, you get left behind.

The Open Pandora project, and its sort-of successor the DragonBox Pyra, are a perfect example. When the largely voluntary and geographically-scattered members of its design team first conceived of a Linux-based, do-everything handheld, the cutting-edge in the space was the Sony PSP.

And sure, back in 2008, the Pandora's spec was impressive. But the Pandora was delayed again and again. Limited batches were created, but eventually the entire device was superseded by a new thing called the DragonBox Pyra.

Today the project limps on, utterly eclipsed by various Android-based, crowdfunded "homebrew" gaming systems, and, of course, the underrated Sony PS Vita.

Now the Switch has joined the party, along with true PCs like the GPD Win. The dedicated open-source templars behind the Pandora and the Pyra have been left in the dust of the unstoppable march of technological progress.

It's a shame really. Because the Pandora always sounded super awesome.

HOTWARE 271
with Terrence Jarrad

01 OWC Thunderblade

$1600+ ▪ Other World Computing
eshop.macsales.com

The Thunderbolt port's throughput allows some truly astonishing technologies, for example, you may be aware of external video cards running through this interface. The Thunderblade is an external SSD.

POWERED UP: Data transfer up to 2800MB/s for a single drive, capacity up to 8TB, daisy-chaining of up to 6 Thunderbolt devices, and RAID capable!

PLAYED OUT: Thunderbolt is not as common as we'd like it to be – though this is improving. Price for 1TB starts around $1600 AUD up to around $6600 for 8TB. You'd require a desperate need for speed to justify this.

02 Logitech Crayon

$70 ▪ Logitech
www.logitech.com

Made for the 6th gen iPads, Logitech's crayon is targeted towards students but is good for anyone art-inclined!

POWERED UP: No latency for input, support palm rejection so you can place your hand on the iPad surface while you draw. Smart tip adjusts the thickness of the line draw depending on the pressure applied. 90 seconds of recharging with a lightning cable will see it ready for 30 minutes' use.

PLAYED OUT: Requires apps that support Apple Pencil.

03 Shadow PC

$50+ per month ▪ Shadow
shadow.tech

You may have heard of "Games as a Service," often incorrectly used to refer to something like an MMO where you pay a subscription fee for access to play. The Shadow PC is a closer representation of games as a service, offering you a gaming PC in the cloud that you can play on almost any device.

POWERED UP: Eight dedicated XEON threads, 12GB of RAM, 256GB of storage, and NVIDIA 1080 "equivalent" graphical power. Simply install the app on your phone/tablet/PC, log in, and you have a remote gaming PC you can play anywhere your internet connection can download at 15Mbps or better.

PLAYED OUT: Latency from controller to remote PC will be a problem, and if you're playing online games, there's another layer of latency there too. Oh, and it's not available in this country. Welp.

04 PocketSprite

$75 ▪ PocketSprite
pocketsprite.com

Want to play all those Gameboy, Gameboy Color, Master System, Gamegear games again? Want to play them on a device the size of a zippo lighter? The PocketSprite has you covered!

POWERED UP: A keychain sized gaming console that'll play all your fav's from yesteryear on a 60+FPS OLED screen, pumping sound through a tiny 8-bit speaker. Also has a rechargeable battery and built in WiFi, for easy game upload!

PLAYED OUT: Honestly this thing looks like one of those "better in theory" ideas, at a size that is very portable but likely barely playable. We aren't sure why anyone would play this instead of literally anything on their smartphone.

05 HAL 9000

TBA ▪ Master Replicas Group
www.masterreplicasgroup.com

If you've ever thought you'd love your digital assistant to malevolently refuse your requests and commands, then this HAL 9000 replica might be right up your ally.

POWERED UP: Uses a Fire HD tablet for its display and integrates with Alexa to interpret your instructions and respond accordingly. And if you get bored of HAL's disobedience, you can just ask Alexa instead.

PLAYED OUT: Not the same voice as heard in 2001: A Space Odyssey.

100% AUSTRALIAN 100% INDEPENDENT | FOR THE LOVE OF LISTS
HYPER
THE 7 STRANGEST PERIPHERALS
WORST BOX ART EVER
25 GAMES WE CAN'T BELIEVE GOT MADE
TOP 5 GAMING DADS
10 MASCOTS THAT DESERVE A REBOOT
AND MORE!
The 200 GAMES YOU MUST PLAY
nextmedia
9 771320 745018 69
ISSUE 269
$5.95 | NZ$10.99 INC GST

ON-SALE NOW

INVENTORY

THE BEST BUILD FOR EVERY BUDGET

CONTROLLERS

Sometimes you gotta go mouse + keyboardless

Xbox One Controller
$69 *microsoft.com/en-au/*
Plug and play meets comfort. Every PC needs a controller and this is the best

Steam Controller
$89.95 *store.steampowered.com*
There's a bit of a learning curve, but it's great for couch gaming

MODEM ROUTERS

For all rational budgets

BUDGET

TP-Link VR600
$169 *tp-link.com*
Not the fastest, but it's stable, well priced and feature packed. ADSL modem built in

Synology Router RT1900ac
$195 *synology.com*
No built-in ADSL modem, but it's fast and has the best interface around

PREMIUM

Asus ROG Rapture GT-AC5300 Gaming Router
$695 *asus.com.au*
Super fast and future proof, this is a gaming router that takes no prisoners and offers no compromise.

LAPTOPS

Gaming on the go

BUDGET

Acer Predator Helios 300
$1899 *www.acer.com*
Great gaming under 2K

PREMIUM

Metabox Prime-X
$6899 *metabox.com.au*
The fastest laptop around costs big

MINI

For lounge room gaming and streaming

CPU + COOLING
Intel Core i5 7500 w/ stock cooler
$254
intel.com

MOBO
Asrock Z270M-ITX/AC Motherboard
$185
asrock.com.au

GPU
Asus DUAL-RX480-4G
$338
asus.com.au

MEMORY
16GB DDR4 Corsair Vengeance LPX
$233
corsair.com/en-au

STORAGE
Samsung SSD M.2 2280 NVMe 250G 960 EVO + 2TB HDD (any)
$169 + $50 *samsung.com/au*

CASE
Fractal Design Define S Nano
$115
fractal-design.com

PSU
SilverStone SFX Gold 500W SX500-LG
$110
Silverstone.com

SOUND
Your sound system
What you paid for it

DISPLAY
Your TV
What you paid for it

KEYBOARD
Roccat Sova
$199
www.roccat.org

MOUSE
Roccat Kone EMP
$99
www.roccat.org

TOTAL: **$1,752**

BUDGET

The perfect entry-level gaming PC

CPU + COOLING
Intel Core i5 7500 w/ stock cooler
$254
intel.com

MOBO
Asrock B250 Gaming K4 Motherboard
$145
asrock.com.au

GPU
MSI GTX 1060 Aero ITX 6G OC
$429
msi.com

MEMORY
G.Skill Ripjaws 4 DDR4 2400MHz 16GB Kit 2x 8GB
$188 *gskill.com*

STORAGE
2TB HDD (any)
$50 *www.staticice.com.au*

CASE
Corsair Carbide SPEC-02 Mid Tower Gaming Case
$80 *corsair.com/en-au*

PSU
SilverStone Strider Essential 500W ST50F-ESB $55
silverstone.com

SOUND
Cougar Phontum
$69
cougargaming.com

DISPLAY
AOC e2470Swh
$158
aocmonitorap.com/anz

KEYBOARD
Tesoro Tizona G2N
$49
tesorotec.com

MOUSE
Cooler Master MM530
$59
coolermaster.com

TOTAL: **$1,536**

ASUS®
No.1 in Quality & Services
The Wall Street Journal Asia
RT-AC5300
Wireless-AC5300
Tri-Band Gigabit Router

We've replaced the Performance and Beast monitors with the new Asus and Alienware displays (reviews on page 77 and 78). We've also upgraded the Beast's memory to a 3466MHz quad channel kit. We've chosen G.Skill Trident Z for the RGB – which looks absolutely fantastic on these RAM sticks. 3466MHz was chosen to provide maximum performance but not ridiculously fast or it could cause issues. The new Ryzen 7 2700X and 2600X CPUs are top performers but Intel is still just in front. That may change next issue when we look at the next Ryzen 3 budget CPUS, plus we're also group testing new Intel Coffee Lake budget B360 motherboards.

PERFORMANCE

Most bells and whistles, without breaking the bank

CPU + COOLING
Intel Core i7 8700K with Noctua NH-D15 CPU Cooler
$589 + $115 *intel.com*

MOBO
Asrock Z370 Taichi
$284
asrock.com.au

GPU
Galax GTX 1080 EXOC 8Gb
$689
www.galax.com

MEMORY
G.Skill RIPJAWS 4 32GB KIT 4X8GB
$229
gskill.com

STORAGE
2TB HDD (any) + SAMSUNG 500GB M.2 NVMe SSD 960 EVO
$319 + $50
samsung.com/au

CASE
Fractal Define R6
$209
fractal-design.com

PSU
Be Quiet! Dark Power Pro 11 850W Power Supply
$279
bequiet.com

SOUND
Sennheiser PC 373D
$329
en-au.sennheiser.com

DISPLAY
Asus ROG Strix XG32VQ
$859
www.asus.com/au

KEYBOARD
Cooler Master MK750
$189
www.coolermaster.com

MOUSE
Roccat Kone Aimo
$99
www.roccat.org

TOTAL: **$4,239**

THE BEAST

When overkill is barely enough...

CPU + COOLING
i9-7900X + Corsair H105
$1530 + $145
intel.com

MOBO
MSI X299 Carbon Pro Gaming AC
$559
msi.com

VIDEO
MSI Lightning GeForce GTX1080 Ti
$1459
msi.com.au

MEMORY
4x8GB G.Skill Trident Z RGB quad-channel 3466MHz DDR4
$819
gskill.com

STORAGE
Samsung 960 Pro 2TB + Seagate Barracuda Pro 10TB
$1589 + $599
samsung.com/au

CASE
CoolerMaster Cosmos II 25th Anniversary Edition
$449
coolermaster.com

PSU
Corsair RM1000i Special Edition
$279
corsair.com/en-au

SOUND
Astro A50
$399
www.astrogaming.com

DISPLAY
Alienware AW3418DW
$2,099
alienware.com

KEYBOARD
Corsair K95 Platinum RGB
$299
corsair.com/en-au/

MOUSE
Razer Deathadder Elite
$95
razerzone.com/au-en/

TOTAL: **$10,379**

Tri-band data rate of of 5334 Mbps
Ultra-fast 802.11ac Wi-Fi router
Smooth 4K/UHD video playback

2.4 GHz 1000 Mbps
5 GHz-1 2167 Mbps
5 GHz-2 2167 Mbps

Exclusive Built-In Game Accelerator

SUBSCRIBE TO PC PowerPlay

AUSTRALIA'S #1 PC GAMING MAG

AND START SAVING NOW!

DESTINY 2 REVIEWED
CONSOLE EXCLUSIVE TO PC HIT?
THE SWORDS OF DITTO
QUESTING WITH CONSEQUENCES
HAND OF FATE 2
HOME-GROWN RPG ACTION
PUBG BEGINNER TIPS
THE TEN COMMANDMENTS OF RINGESUS
ASSASSIN'S CREED: ORIGINS
EXCLUSIVE INTERVIEW WITH BRENDAN GREENE OF
PLAYERUNKNOWN'S
BATTLEGROUNDS
GTX 1070 TI ROUNDUP
THE PERFORMANCE/PRICE SWEET SPOT
MECHANICAL KEYBOARDS
THE BEST NEW BOARDS REVIEWED!
AMD RAVEN RIDGE APU REVIEWED
CAN THE CPU/GPU CHIPSET CUT IT?
AUSTRALIA'S #1 PC GAMING MAG
PC PowerPlay
SINCE 1996
GAME OF THE YEAR
ALL THE WINNERS FROM 2017
KINGDOM COME: DELIVERANCE
CAN AN HISTORICALLY ACCURATE RPG ACTUALLY BE FUN?
Vampyr
CRUCIAL MX500
THE 1TB SSD IS NOW AN AFFORDABLE MEMORY SOLUTION
CIV VI: RISE AND FALL
NEW CORE MECHANICS FOSTER EXPERIMENTATION
THERE IS SOMETHING DEADLIER THAN THE SPANISH FLU IN 1918 LONDON
Warhammer:
VERMINTIDE II
ONLY YOU CAN SAVE THE EMPIRE WHEN THE FORCES OF CHAOS JOIN THE SKAVEN HORDES
STAR WARS BATTLEFRONT II
SEVEN: DAYS LONG GONE
PAX INDIES

GET THE BEAST ON YOUR CHEST!

Receive a complimentary PCPP t-shirt when you subscribe *

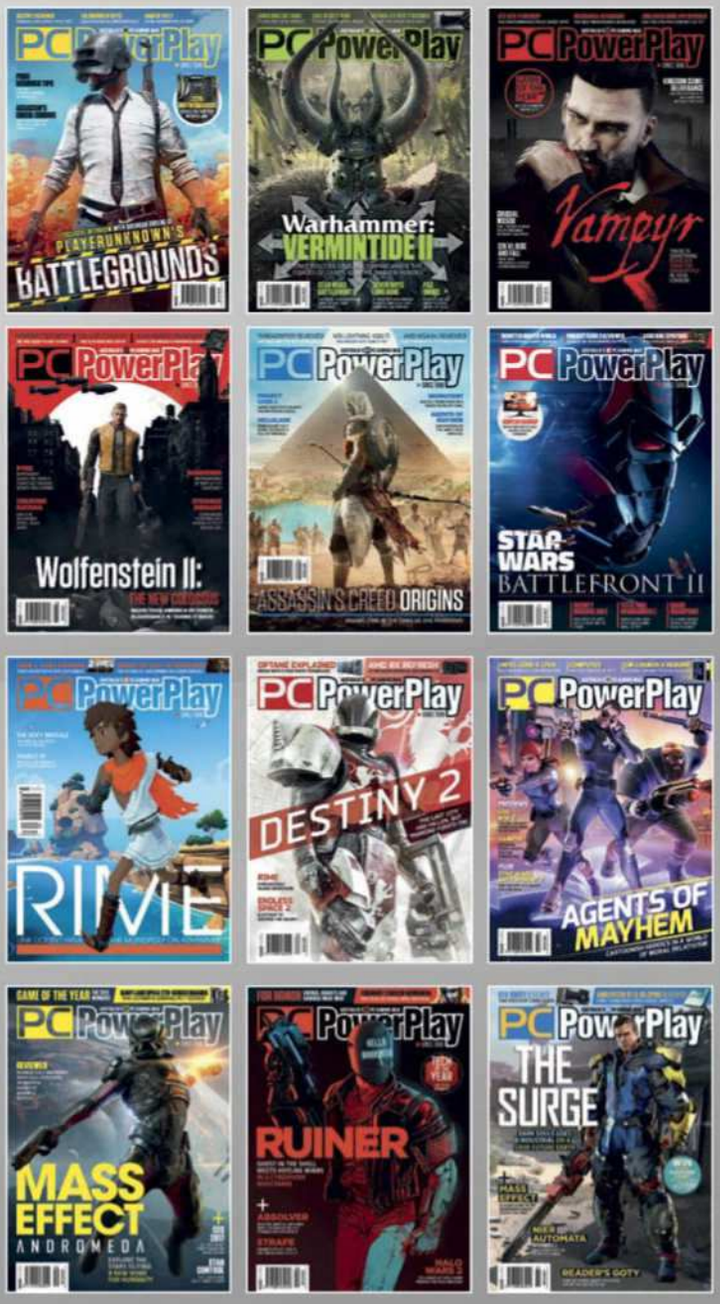
NEW DEALS!

2 yrs (14 issues) only **$119** SAVE OVER 39%

1 yr (7 issues) only **$69** SAVE OVER 29%

WHY SUBSCRIBE?

HUGE SAVINGS on cover price
FREE delivery to your door
NEVER miss an issue!
*BONUS t-shirt



mymagazines.com.au

SUBSCRIBE NOW!

3 EASY WAYS TO SUBSCRIBE!

Please photocopy the form if you don't want to ruin your awesome mag

ONLINE: mymagazines.com.au

OR CALL US:
1300 36 11 46
or +612 9901 6111 (overseas)

POST TO:
PCPP SUBSCRIPTIONS
LOCKED BAG 3355,
ST LEONARDS NSW 1590

YES! I'LL SUBSCRIBE TO PC PowerPlay

Me **Gift** (Please tick one)

☐ ☐ **14 issues** (2 years) only $119 - SAVE OVER 39%
+ BONUS t-shirt

☐ ☐ **7 issues** (1 year) only $69 - SAVE OVER 29%
+ BONUS t-shirt

S **M** **L** **XL** (Select your T-Shirt size)

☐ ☐ ☐ ☐ Preferred t-shirt size (Australia & New Zealand Only)

(S: 49cm chest, 72cm length. M: 52cm chest, 75cm length. L: 55cm chest, 78cm length. XL: 58cm chest, 80cm length)

Enclosed is a cheque/money order for A$_____
made payable to nextmedia Pty Ltd OR please charge my credit card:

☐ Visa ☐ Mastercard ☐ American Express

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Name on card:_____Expiry Date:_____/_____

Signature: _____ CVV:_____

My Details:

Full Name: _____

Address:_____

_____State:_____Postcode:_____

I am over 18 years of age ☐ Yes ☐ No

Daytime Telephone: ( )_____

E-mail Address:_____

Please provide phone or email in case of delivery issues

Please Send this Gift Subscription to:

Full Name: _____

Address:_____

_____State:_____Postcode:_____

Daytime Telephone: ( )_____

E-mail Address:_____

Rates and BONUS T-shirt offer available to Aust and NZ residents only ending 22/8/18, inc GST. Overseas: 1yr /7 issues A$119. Savings based on cover price. Subscriptions commence with the next issue to be mailed, please allow 6-8 weeks for delivery of your first issue and separate delivery of your bonus t-shirt (after 22/8/18). T-shirt sizes are subject to availability and only while stocks last. A 1 year (12 month) subscription to PC Powerplay is 7 issues (inc 2 special issues). This form may be used as a Tax Invoice. nextmedia P/L; ABN 84 128 805 970. Our full Privacy Notice can be found at www.nextmedia.com.au. Please tick if you do not wish to receive special offers or information from nextmedia or its partners via ☐mail, ☐email or ☐phone. If you prefer to receive your communication electronically, please ensure we have your current email address.

MA/PCD271

THEME AND LACK OF VARIATIONS

What's the downside of creating a flip-book puzzle adventure game using Mac software and having it sell six million copies and make you a legend of early-90s videogame design? Not being able to let that go.

MYST

DEVELOPERS CYAN WORLDS
PERSONALITIES RAND AND ROBYN MILLER
RELEASED 1993
NUTSHELL Apple's Hypercard 90s buzz-word hypermedia 'programming' language allows an incorporeal investigator to flick between static locations where they pull levers and feel smart.

Way back in deep geological time (aka, 1973) a musician named Mike Oldfield created a prog-rock album called Tubular Bells. It was one of those rare pieces of art that was both revolutionary and inoffensive, such that, as far as can be determined, every single person who owned a record player in the 1970s bought a copy.

Oldfield became a household name and an icon of British music, despite never quite revisiting the high of his first album. Sure, he had success, but everything he did after 1973 has been defined as either "trying to be Tubular Bells again" or "deliberately trying to NOT be Tubular Bells again."

Which brings us to Cyan.

A tidy 20 years after Tubular Bells, and in a completely different medium (although one in which Oldfield himself lusted for relevance, at least for a while), brothers Robyn and Rand Miller used Apple's Hypercard programming system and a whole lot of Silicon Graphics rendering time to create Myst.

When Myst hit shelves in 1993, with its postcard-like still-image environments, between which the player would move with no animation whatsoever, PC gamers were already anticipating a real-time future. We had the 7th Guest, which used pre-rendered animations to move from puzzle-room to puzzle-room. We had Doom, of course, which hinted at a hyperkinetic future of extreme energy and violence. And we had an existing pantheon of great games, from Wing Commander to Police Quest and more, that promised us the future of gaming was to be cinematic, not literary.

Myst, on the other hand, ran on the Mac. Because of this, it penetrated what was, in the 1990s, a vast and untapped market: non-gamers. Everyone bought Myst. My dentist bought Myst. For years, probably until at least 2000, whenever you tried to tell a non-gamer (especially a Mac user) about some amazing new graphical innovation on the PC, they'd say: "Sure, but did you ever play Myst? Now those were good graphics!"

Back in the 1990s, non-gamers failed to understand something very basic. Graphics are supposed to move. Merely using a Silicon Graphics workstation to ray-trace a fantastical and surreal island landscape with, like, an airship and cogs sticking out of the ground, wasn't enough. PC gamers demanded worlds, not storybooks.

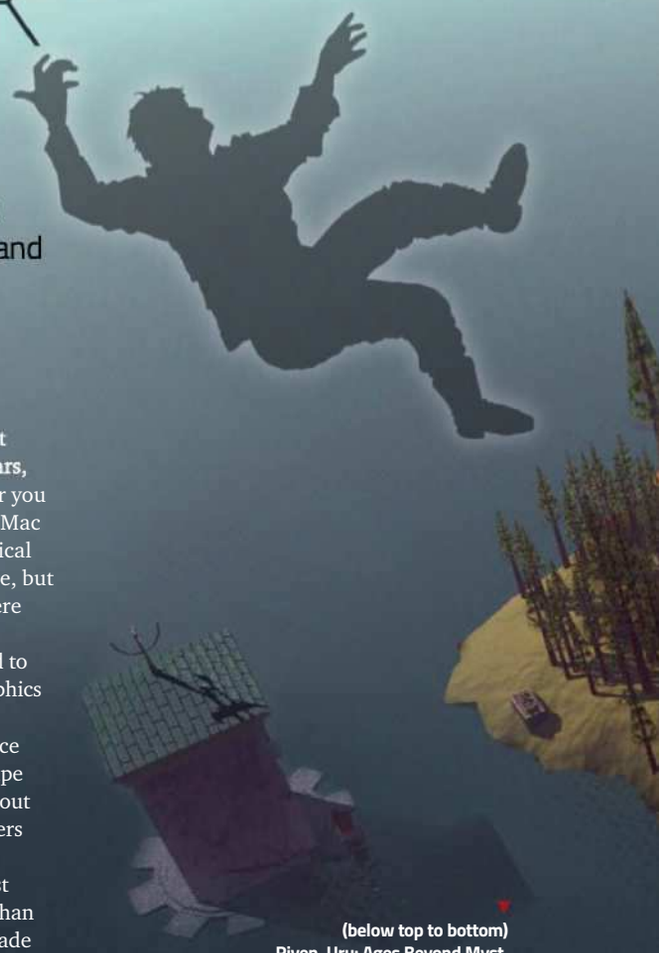
To be fair to the Miller brothers, Myst never pretended to be anything other than literary. Its "linking book" mechanic made that explicit. The whole point of the game was to move around a weird island and engage with weird puzzles. Its mindset was all about the detail. The graphics had to be in 640x480 so you could see if the tiny pilot-light on the boiler was actually lit or not.

And the machines of 1993 absolutely could not render at 640x480 real time. Oh fine, maybe Microsoft Flight Sim 4.0 or something, but not a fully-textured environment with thousands of polygons. Also the Millers couldn't really, you know, code.

Myst came with a Journal in the box, all official-like and bound and nice. When you opened it, the book was blank. You were supposed to keep notes in there. Sketch constellations. Make maps. Myst bombarded the player with esoterica and made no attempt to hold any hands.

It also had no timer, no countdown, no score, no lives, no levels, nothing that non-gamers usually associated with games. Because in 1993, the wider population thought of games as being fancier versions of Space Invaders, or maybe Super Mario "Bross" if they were particularly hip.

Myst offered the proto-humans of the 1990s the experience of staring at a screen for five minutes, clicking a lever, going "Hmn…", and then shutting down the PC to



(below top to bottom) Riven, Uru: Ages Beyond Myst, and Myst V: End of Ages

> Uru had a very troubled life, occasionally popping up on live servers only to be shut down shortly thereafter.

go and make dinner. It was, in many ways, a preview of the future.

Myst was duly ported to pretty much every platform that existed at the time including the Atari Jaguar, sold six million copies, and remained the best-selling PC game until the Sims came along in 2002 and successfully ensnared a whole new kind of non-gamer: women.

Meanwhile, Cyan went on to produce a sequel called Riven.

Riven sold 1.5 million copies in 1997-1998, was critically lauded, and is still probably under-appreciated, at least in terms of how much raw human talent went into its creation.

After Riven, the Miller brothers parted creative ways. Cyan (the company) built a super-cool HQ in Washington State, with just the most awesome sunken creative library-type central area, and spent the next decade trying to build a real-time, massively-multiplayer version of Myst, called Uru.

Uru had a very troubled life, occasionally popping up on live servers only to be shut down shortly thereafter by whichever publisher had been mad enough to take it on that year.

Ubisoft somehow got mixed up in the whole thing, and while waiting for Cyan to do... something, anything... tasked other studios with creating Myst III and Myst IV.

These were perfectly adequate Myst-clones that sold unspectacularly. Meanwhile, Uru gathered itself a tiny cult following and refused to either take off or completely die.

That didn't keep the lights on at Cyan, of course, so the developer found itself more or less compelled to create Myst V: End of Ages. Because this was 2005, Myst V was a real-time game but Cyan's decision to texture-map live actors onto 3D character models produced ghastly results. If nothing else, Myst V proved that the pre-rendered, flip-book style of Myst and Riven had been a super-correct decision on Cyan's part.

Uru trundled along in the background and its fate is complicated and only really interesting to people who love Uru, and those people already know the story. Its servers were even hosted by fans at one point. Cyan released a couple of expansions for it, and it's on Steam again. For some reason.

Which brings us back to the Mike Oldfield comparison. Oldfield fanatics will know our Mike has a habit of starting every single new album with a haunting piano or synth lead that, even if only ephemerally, evokes the famous opening to Tubular Bells (you know the riff if you're a fan of the Exorcist).

So too has Cyan sort of devolved into a company that repackages Myst onto every possible platform to extract every possible dollar from this 25-year-old IP. Peak cynicism was achieved in 2000, when Cyan created realMyst, a realtime version of, uh, Myst. And then realMyst Masterpiece Edition 2.0 in 2015, which had higher-resolution textures.

At time of writing, and despite every Cyan game being on Steam in a package that crashes a lot, there's a Kickstarter asking real dollars for yet another repackage of every single Myst-branded in one, easy-to-pay-for download.

What does any of this mean? Probably something about being aware of early success. And something about how Cyan should let this venerable property fade into memory with grace, like Chris Roberts has done with Wing Commander.

Oh wait... PC

Next Issue

PC PowerPlay

AUSTRALIA'S #1 PC GAMING MAG

TECH SPECIAL ON SALE

19.07.18

ATEN

www.aten.com

INTRODUCING

PHANTOM-S™

PC-like FPS Gaming Experience

Works with
PS4/Slim/Pro / PS3 /
Xbox 360 / Xbox One/One S

PS4™ REMOTE PLAY AND XBOX GAME STREAMING

UNPARALLELED PRECISION

EXCLUSIVE PLAY MODE FOR LAPTOPS

AVAILABLE NOW

To learn more, please visit: http://phantoms.aten.com

ATEN Australia and New Zealand

Phone: 02 9114 9933
Email: sales@au.aten.com

AORUS

RULE ALL BATTLEFIELDS

AORUS 300 SERIES GAMING MOTHERBOARDS

Supports 8th Gen Intel® Core™ Processors

8+2 HYBRID DIGITAL POWER

Intel® CNVi WIFI Ready

GAMING ViBes

RGB FUSION

Smart Fan 5

Product features may vary by model.

au.aorus.com

GIGABYTE™